Genetic Evidence of Early African Migration into America

Original Article

Testing Evolutionary and Dispersion Scenarios for the Settlement of the New World

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Posted by 🍓 Clyde98 on 19 May 2011 at 16:27 GMT

by Clyde Winters

Although, Hubbe et al support a two migration theory for the settlement of the Americas, the researchers maintain that currently available genetic evidence suggests a "single migration model for the peopling of the Americas. This suggests that we need to look further into the molecular history of the Americans to determine if there is evidence of non-Amerindian molecular among Amerind populations.

The early presents of Negroes in South America suggest a migration of Sub-Saharan Africans into the Americas 40-15 kya. We can assume that if Africans early colonized the Americas there must be genetic evidence supporting their ancient presence. Evidence should exist today in Amerindian populations pointing to Sub-Saharan haplogroups among the varied populations if Africans made an early migration.

A review of the literature suggests such a phenomena. Lisker et al, noted that "The variation of Indian ancestry among the studied Indians shows in general a higher proportion in the more isolated groups, except for the Cora, who are as isolated as the Huichol and have not only a lower frequency but also a certain degree of black admixture. The black admixture is difficult to explain because the Cora resides in a mountainous region away from the west coast" (1).

Green et al also found Indians with African genes in North Central Mexico, including the L1 and L2 clusters (2). Green et al observed that the discovery of a proportion of African haplotypes roughly equivalent to the proportion of European haplotypes [among North Central Mexican Indians] cannot be explained by recent admixture of African Americans for the United States. This is especially the case for the Ojinaga area, which presently is, and historically has been largely isolated from U.S. African Americans. In the Ojinaga sample set, the frequency of African haplotypes was higher than that of European haplotypes" (2).

The genetic evidence for Africans among the Mexicans is quite interesting. This evidence supports the skeletal evidence that Africans have lived in Mexico for thousands of years.

The foundational mtDNA lineages for Mexican Indians are lineages A, B, C and D.The frequencies of these lineages vary among population groups. For example, whereas lineages A,B and C were present among Maya at Quintana Roo, Maya at Copan lacked lineages A and B (3). This supports Carolina Bonilla et al view that heterogeneity is a major characteristic of Mexican population (4).

The mtDA A haplogroup common to Mexicans is also found among the Mande speaking people and some East Africans (4-6). Haplogroup A found among Mixe and Mixtecs (4). The Mande speakers carry mtDNA haplogroup A, which is common among Mexicans (6). In addition to the Mande speaking people of West Africa, Southeast Africa Africans also carry mtDNA haplogroup A (5).

Underhill, et al noted that:" One Mayan male, previously [has been] shown to have an African Y chromosome" (7). This is very interesting because the Maya language illustrates a Mande substratum, in addition to African genetic markers. The Mixe Mixe carry African Y-chromosome DYS287(YAP+) in Mixe individuals who harbored DYS199 C allele (8).

James I. Gutherie (2000) in a study of the HLAs in indigenous American populations, found that the Vantigen of the Rhesus system, considered to be an indication of African ancestry, among Indians in Belize and Mexico centers of Mayan civilization(9). Dr. Gutherie also noted that A*28 common among Africans has high frequencies among Eastern Maya. It is interesting to note that the Otomi, a Mexican group identified as being of African origin and six Mayan groups show the B Allele of the ABO system that is considered to be of African origin (9-10). We conclude that the genetic evidence points to distinct origins for the Paleoamerican populations. This molecular evidence supports a possible early colonization of the Americas, not only by Melanesians as suggested by Hubbe et al, but also Africans. The molecular evidence is consistent with Hubbe et al two wave human expansion across America, while supporting an introduction of some Americans directly from Africa.

Some researchers claim that as many as seventy-five percent of the Mexicans have an African heritage (2). Although this may be the case Cuevas says these Africans have been erased from history (11).

References:

1. R. Lisker et al.(1996). Genetic structure of autochthonous populations of Meso-america:Mexico. Am. J. Hum Biol 68:395-404.

2. Green, L.D., (2000), "Mitochondrial DNA affinities of the people of North-Central Mexico", Am J of Hum Genet, 66:989-998.

3. Angelica Gonzalez-Oliver et al. (2001). Founding Amerindian mitochondrial DNA lineages in ancient Maya from Xcaret, Quintana Roo. Am. Jour of Physical Anthropology, 116 (3):230-235. Retreived 2/9/2006 at:

http://www3.interscience.wiley.com/cgi-bin/abstract/85515362/ABSTRACT?CRETRY=1&

4. Bonilla C, Gutierrez G, Parra E J, Kline C, Shriver M D. (2005). Admixture of a rural population of the State of Guerrero, Mexico, Am J Phys Anthropol. Dec;128(4):861-9.

5. Salas A, Richards M, De la Fe T, Lareu M V, Sobrino B, Sanchez-Diz P, Macaulay V, Carracedo A. (2002). The making of the West African mtDNA Landscape, Am J. Hum. Genet, 71:1082-1111.

6. Jackson B A, Wilson J L, Kirbah S, Sidney S S, Bassie L, Alle J A D, McLean D C Garvey W T.(2005). Am J Phys Anthropol. 128:156-163.

7. Underhill,P.A.,Jin,L., Zemans,R., Oefner,J and Cavalli-Sforza,L.L.(1996, January). A pre-Columbian Y chromosome-specific transition and its implications for human evolutionary history, Proceedings of the National Academy of Science USA,93, 196-200.

8. Lell J T, Brown M D, Schurr T G, Sukernik R I, Starikovskaya Y B, Torroni A, Moore L G, Troup G M Wallace D C.1997. Y chromosome polymorphisms in Native American and Siberian populations: identification of Native American Y chromosome haplotypes, Hum Genet. , 100(5-6):536-43.

9. James L. Guthrie, Human lymphocyte antigens: Apparent Afro-Asiatic, southern Asian and European HLAs in indigenous American populations. Retrieved 3/3/2006 at:

http://www.neara.org/Guthrie/lymphocyteantigens 02.htm

 M.H. Crawford et al (1974). Human biology in Mexico II. A comparison of blood group, serum, and red cell enzyme frequencies and genetic distances of the Indian population of Mexico. Am. Phys. Anthropol, 41: 251-268.
Marco P. Hernadez Cuevas. (2004). African Mexicans and the discourse on Modern Mexico. Oxford: University Press.

No competing interests declared.

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