

Amerindian mtDNA in Puerto Rico: When does DNA matter?

By Jorge Estevez

Understand that this fascination with investigating, preserving, educating, and recognizing the truth about our Taíno past has only just begun. We hope that this wonderful obsession that has governed our lives for so many years, converts itself into a slogan of a life transformed by the past.

— SONIA MIGDALIA ROSA-VÉLEZ (2002) —

This is a response to Haslip-Viera's (2006) essay published in *CENTRO Journal* and titled "The Politics of Taíno revivalism: The insignificance of Amerindian mtDNA in the population history of Puerto Ricans." In it Haslip-Viera critically comments on the recent mtDNA research, analysis, and conclusions of Dr. Juan Martínez Cruzado, who demonstrated that up to 61 percent of Puerto Ricans have Amerindian ancestors. Although eloquently written, as is always the case with the author, the article seems to miss the point of current research entirely. Further, the author's claims are based on the assumption that history is not biased and therefore cannot lend itself to scrutiny or re-interpretation due to new evidence that may arise to the contrary. The aim of this article is to offer a different perspective. It explains why 61 percent of the current population of Puerto Rico is indeed a significant number and how this revelation can only re-enforce Puerto Rican identity.

It is clear that Puerto Ricans can and do identify with either European or African ancestry without fear of ridicule or otherwise. On the other hand when Puerto Ricans identify with their native heritage, they are often labeled racists, or at best fanatics. In fact, identifying with the Indian component of this tripartite population is somehow seen as a denial of Negritude and misguided romanticism. The obvious implication of Taíno DNA in modern Puerto Ricans suggests that perhaps the history of the island must be re-evaluated. If this is the case, then people claiming Taíno descent are not delusional, as some have stated, but rather part of a growing trend among Caribbean peoples to learn the truth about their past. The extinction of the Taíno is a myth, and like all myths, eventually this one will die out as well.

As most people who are familiar with the Caribbean know, there are no Amerindians in the region, at least this is what has been traditionally said, written, and accepted. For this very reason, news of Native American mtDNA in the modern population of Puerto Rico is causing quite a national and international stir. In March 1999, Dr. Juan C. Martínez Cruzado, a biology professor at the University of Puerto Rico in Mayagüez, conducted a mitochondrial DNA restriction study on 800 people selected based on the 1990 Census of Population and Housing by a random and systematic method designed to choose a sample set representative of the Puerto Rican population. The study found that a staggering 61 percent had mtDNA deriving from a female Indian ancestor. Mitochondrial DNA is passed down through the mother's line to her children; however, only her female children can pass along the mtDNA. For some this was not particularly surprising. Indeed, it certainly was

not surprising to those involved in what is commonly called the Taíno Restoration Movement. Also not surprised were many *indigenistas* who in the past had to publicly adhere to the conservative view of the island's supposed "extinct" Taíno population, while privately agreeing that there are indeed varying degrees of cultural, linguistic, and biological survival. Clearly, science is proving that even things that appear to be set in stone can be refuted with modern investigative techniques and tools.

Dr. Juan C. Martínez Cruzado has given countless lectures and published several papers on this intriguing subject both in Puerto Rico and the Dominican Republic. In these lectures Dr. Martínez Cruzado has made it clear that of the 61 percent showing mtDNA in Puerto Rico, 16 percent show that they are descendants of Indians who were probably brought to the island as slaves or in migrations from other Latin American countries. It is the remaining 84 percent that either pose a problem for some or offer a solution to others as to the true fate of the island's native population.

When many scholars first became aware of these mtDNA studies, they suggested that the results must be wrong. This argument later changed into a vague admission of native descent on the island. Some proposed that these native genetic traits must come from migrations from abroad or possibly from Indian slaves brought to the island during colonial times. If this were true, surely there must be some record, somewhere, clearly stating that the number of Indian slaves being brought to Puerto Rico was higher than the importation of African slaves. But there isn't any. In addition, this DNA study was based on females. The majority of slaves, African, Indian, or otherwise, who were brought into Puerto Rico and the other Caribbean Islands were mostly males.

Mitochondrial DNA is located in the mitochondria, and 100 percent of this DNA is inherited from the mother. In contrast to most DNA of eukaryotic organisms, this is found in the nucleus. Branches of mtDNA (female) or Y-DNA (male) are known as "Haplogroups." Native American mtDNA haplogroups are as follows; A, B, C, and D. These are found throughout the Americas. Within the Haplogroups there are different sequence types called "Haplotypes," and these run into the thousands. In a private email to the author, Bennett Greenspan, President of FamilyTreeDNA, a company that establishes DNA fingerprints for the purpose of determining ancestral pedigrees, explains: "We have Haplogroups A and A2 (a master grouping and a sub-groups). Within A we have 258 unique specific motifs (or signatures) and in A2 we have 3 more and in A2a we have 2 more and so on. So Haplotypes are very specific while Haplogroups are much broader. If you collapse the A, A2 and A2a into just A you can see that each Haplogroup branch will have hundreds of unique sub-groups."

Dr. Martínez Cruzado's analysis found that 88 percent of Puerto Rican Native American mtDNAs are composed of Haplogroups A and C, with A being the most dominant. Within these two Haplogroups, which are also found throughout the Americas, there are Haplotypes that are not found in North, Central, or South America. In other words, they are geographically specific, localized Haplotypes. In a smaller, but certainly not conclusive study conducted in the Dominican Republic, Dr. Martínez Cruzado found that 80 percent of the Native American mtDNAs belonged to Haplogroups A and C. The fact that *Haplogroups* A and C dominate on both islands suggests a common origin. However, in comparing both Haplogroups *between the islands*, there was no clear match. The best explanation is that the Native American populations of both islands had a common origin but separate evolutionary processes within their respective domains. Separate evolutionary processes could happen only if they have been on those islands for thousands of years, which the classic Taíno were.

Many archeologists maintain that anywhere between 6000 to 7000 years ago native groups from Central America, possibly from the Yucatan, arrived in the Caribbean. About 4000 years later, migrations from the Orinoco river basin in South America began arriving. It was a mixture of all these different peoples that eventually gave rise to the classic Taíno. It stands to reason, then, that the classic Taíno did not and could not belong to a single Haplogroup. In Puerto Rico, the Haplogroup A samples indicate the last wave of Arawakan speakers to enter the region.

In April 2005 the *National Geographic* selected FamilyTreeDNA to head the Geographic project, a massive undertaking focusing on tracing human migrations. People from around the world submitted inner-mouth swab samples for the project (this is how DNA samples are extracted). Of the Puerto Ricans that independently submitted samples (mostly people doing genealogical investigations), 70 percent are showing Haplogroups A and C with minor B and D. A smaller number of Dominicans and Cubans have also submitted samples. Roughly 50 percent of each of these populations is showing Haplogroups A and C as well. In short, this independent study is confirming, without setting out to do so, Dr. Juan Martínez Cruzado's original findings.

So what does this all mean? For starters, one cannot simply dismiss DNA as some people would have us believe. DNA analysis and conclusions are complicated and not easily understood by non-geneticists. When it is shown that 61 percent of a population is of Amerindian origin, and there isn't supposed to be any persons with such a background, the results are very impressive. Dr. Gabriel Haslip-Viera's assertion that mtDNA is insignificant in Puerto Rican demographics inspires the following question: if 61 percent is not significant, then what percentage is? Haslip-Viera's paper claims that the 61 percent showing mtDNA may have derived from a population of as little as 125 native females (this kind of analysis is usually done by molecular anthropologists), but it could also have come from as many as 800 or even 8000 females. There is no way to know for sure. The fact remains that 61 percent of the population does indeed have native mtDNA.

Is there Taíno ancestry on the island? It is a question that has been asked many times before. The answer has come swiftly, with a scientifically definitive yes. So why the continued denial and staunch opposition? Let us imagine for a moment a court case where a prosecutor has successfully prosecuted and convicted a man to life imprisonment. Later this convicted man is exonerated through DNA, which verifies that he was not even at the scene of the crime. Does the prosecutor run to the jail with keys in hand to let him out? No, he will continue to deny this man his freedom. Why? Well mostly because this man's career does not permit him to be wrong. He has gone on public record with the utter certainty that the man was guilty. A conviction is the mark of his progress, and he cannot go back on his word. This too has happened with historians who are now confronted with factual DNA evidence as to the true fate of the classic Taíno.

Of course to many historians it seems that if the current scientific evidence does not support the historical "facts" model, then the data must be faulty. But if we take a closer holistic approach to the question of Taíno survival along with the DNA evidence, a clearer picture emerges. Native linguistic influence on Caribbean Spanish, material culture, and other dimensions of Taíno culture are rarely studied, and when they are, it is usually superficially. The fact is that the amount of linear succession is remarkably uniform and vast throughout Puerto Rico and the other major islands of the Caribbean. Let us take a look at some of these.

Linguistics

Two hundred everyday words and expressions in addition to several thousand attested toponyms of Taíno lexicon are used in the Spanish spoken in the Caribbean. This is no casual linguistic influence. In most books the classic Taíno are credited with leaving only a few words, such as barbecue, hurricane, savannah, hammock, or canoe. One would assume that if this is all that is left of the Taíno language, then surely the classic Taíno's influence on the modern Spanish of the region is minimal and further proof of the virtual demise of the population. But upon closer inspection it becomes clear that the classic Taíno left a substantially deeper impact on the Spanish language. Two hundred words are neither minimal nor coincidental, but are in fact direct evidence of this people's continuity and survival.

Many historians in the past have tried to reconcile this obvious linguistic legacy with the "fact" of Taíno extinction. How can people that supposedly died out thirty years after contact, as many historians claim, leave so many of their words? The most immediate assumption is that the Spaniards, not having names for the new things they encountered, borrowed the existing Taíno names. While this is certainly plausible in some cases, it certainly cannot be applied to the multitude of Taíno words used today. One good example comes to us from Bartolomé de las Casas, who wrote:

Allí veriades (en las minas o lavadores de oro) hacer sus mochilas cada uno de vizcocho de la harinilla que les habia sobrado o train de Castilla I llevarlas a cuesta con sus azadores I gamellos o dornajos, que acá llamaban I hoi llaman bateas.
(p. 35 Tomo III)

In this case we see that the Spanish had not one but two names for the single-piece wooden tray (*dornajo* and *gamello*) that the classic Taíno called *batea*. In Puerto Rico and the other Caribbean islands both the word *batea* and the instrument are still used today. But why do we still call it *batea*? Unless the Spanish collectively decided to exchange either name they had for these trays for the Taíno name *batea*, it makes no sense why we would still call these instruments by their ancient native name.

Another example is that La Casas uses the word *mochila* (knapsack), which of course is Spanish. In Taíno the equivalent word for knapsack is *makuto*. Today school children still use the Spanish word *mochila* for knapsack. However, in the *campo* (countryside) people still use the word *makuto* instead of *mochila*. This implies that both the Spanish and Taíno names have been used traditionally in Puerto Rico and the Caribbean region, and both names have become a part of our lingo. In the absence of one language, one would assume that the word *makuto* would have become nothing more than a slang term and of course not last the 500 years that it has.

Other words such as *chin*, *chin-chin* (a little bit), and *macana* (club), seem to be in use along with their corresponding Spanish variations, *poquito* and *palo*. These words are common throughout the Caribbean. Ask any person from the region what these words mean, and you will get a quick response. On the other hand Spanish-speaking peoples for other parts of Latin America will not know what these words mean. These words have been in continuous use on the island since the contact period. What could be so special about the word *chin* or *macana* that we would use it in place of *poquito* or *palo*?

Some modern linguists have stated that not enough research has been done on the remnants/influence of classic Taíno language on the Spanish of the region (Granberry

2004). In contrast, the English-speaking countries of the Caribbean have very few words stemming from the Taíno language. In places like Jamaica (which does in fact have Taíno/maroon continuity) we find few Taíno words. The names of flora and fauna have been replaced with English names. Fruit such as *guanabana*, a Taíno name that was commonly used in Puerto Rico, is now called soursop. Could it be that the English (who also had contact with the Taíno) were able to “make up” or exchange their own names for certain things they were not familiar with and the Spanish could not?

Material Culture

It is inexplicable if not irresponsible to keep Taíno in the realm of the past. This trend, however, is certainly not unique to Puerto Rico, for it seems to be done in most Latin American countries. My opinion on this is that social Darwinism is a rule that is followed to the letter regarding any connection to the indigenous past, making us then descendants of “savages” rather than the Spanish conquerors.

On 15 September 2006 I attended the opening of “The New Old World Photographic Exhibit” at the Mueso de la Américas, Cuartel Ballajá. This exhibit was on loan from the Smithsonian National Museum of the American Indian, featuring photographer Marisol Villanueva’s work on Taíno/Carib material culture.

The exhibit was Caribbean wide in scope and focused on the surviving material culture of both the Taíno and Carib. It was very clear from the exhibit that both of these two peoples share very similar cultural traits. The rural cultures of Puerto Rico and the other Caribbean islands have retained a significant degree of customs and practices from our Taíno ancestors. I felt that at last the Taíno legacy was receiving some recognition.

There was another exhibit, titled “Our African Heritage,” which displayed many strikingly beautiful objects from across Africa. Ironically, none of the objects were made in Puerto Rico or by Puerto Ricans. The objects came from a private collection donated by Dr. Ricardo Alegría. While there certainly are many cultural icons that do reflect the African cultural legacy in Puerto Rico, I felt that this was a poor example of it.

One thing that disturbed me about this exhibit was a case displaying an object that is clearly Taíno: the *güiro*, a rasping instrument that is used in merengue, salsa, and bachata music. This instrument, traditionally attributed to the Taíno, has now become African!

According to Ricardo Alegría, who is the father of Puerto Rican archeology, the *güiro* must be African simply because there is no mention of it by the Spanish chroniclers. I pointed out that the chroniclers also never mentioned the Taíno stone collars used during the course of *batul/batey* games our ancestors played. In other words one can only guess at the number of cultural objects and customs the Spanish did not record simply because it did not hold their attention, and of course today’s scholars assume it must be African if said objects are not Spanish. As my friend and colleague Dr. Max Forte, head editor of the Caribbean Amerindian Centrelink webpage, says, “African seems to be the default identity in the Spanish Caribbean.” If it is not clearly Spanish, then it must be vaguely African.

The word *güiro* itself is of Taíno origin. It stems from Native words such as *biguera* (Caribbean gourd), *güichara*, *güira*, etc. Unless the Africans brought the *güiro* over from Africa and then decided to give it a Taíno name, there is absolutely no reason why the *güiro* should be considered African. Besides, anyone familiar with African cultures knows that the *güiro* is not used in Africa, neither in tribal music nor in the contemporary African music scene. It simply is not an African instrument.

It would be wonderful to see an exhibit in Puerto Rico focusing on Taíno material

culture and customs, beyond the archeological findings. Such an exhibit would shed light on *casabe* making, *mabi* preparation, the nets used for catching *jueyes* (crabs), basket weaving (*jabas*), and fishing nets (*nasa*), *pasteles*, endemic medicinal plant use, and the multitude of Taíno customs that have continued to be a part of Puerto Rican culture. But these are rarely mentioned and often overlooked; hence many people on the island are not even aware of just how much Taíno cultural continuity there is.

Census

I will not offer much in the way of census records simply because I do not believe in them. As a native from the Dominican Republic, I find that today, in the age of computers, we cannot get an accurate census count. In the Dominican Republic there is no accurate number of illegal Haitians living in the country. Why? The Haitians for obvious reasons do not want to be counted. The same can be said of illegal Dominicans living in Puerto Rico. How many are there? There are only estimates, but no one knows for sure. Some people believe census takers have hidden agendas and refuse to be counted. It seems highly unlikely that, 450 to 500 years ago, when our ancestors were fleeing and hiding for their lives, few of them would have wanted to be counted. For the Spanish it would have been nearly impossible to count people who were living in the most remote areas of the island. Although Puerto Rico has a small landmass, it is also extremely mountainous. In the past it was easier to have material goods delivered from outside the island than from its interior!

To support his argument Haslip-Viera (2006) used many quotes from Karen F. Anderson-Córdova's dissertation (1990). It is clear that we cannot discount the fact that natives were imported from other parts of the Americas into the Caribbean—as Anderson-Córdova states in her dissertation. But were these slaves female or male? Most of the slave trade focused on males for obvious reasons; after all, men were thought to be better suited for working the gold mines and the sugarcane fields. That said, the mounting evidence of Taíno mtDNA survival only adds to the hypothesis that there is indeed a native element in the Caribbean. The problem I find with Anderson-Córdova's otherwise brilliant work is that at the time she wrote it, mtDNA studies were a few years in the future. Mitochondrial DNA could have either substantiated her hypothesis or lent it a wider scope. At the time the only evidence to support her theories were based on historical records. These records reveal that the Spanish historians manipulated records or reported from a very biased viewpoint for selected audiences.

American historian Dr. Lynne Guitar, who has done extensive historical and ethnographic work in the Dominican Republic, writes that “colonists and Spanish administrators in the sixteenth century manipulated their reports, letters, censuses and histories for their own social, economic and political gain.” Closer inspection of the historical record reveals that in one form or another Indians are mentioned in Puerto Rico's history as well as in Cuba and the Dominican Republic. It is evident that the supposed extinction of the people is a point of view created by past historians and perpetuated by their modern counterparts. Dr. Guitar also demonstrates that the islands were never governed in their entirety. The Spanish had outposts, towns, and a few cities, but most of the inaccessible regions of the islands remained isolated. Below are a few examples of Taíno's mentioned in Puerto Rican history:

In 1543 it was reported to the King of Spain by the bishop of San Juan, that there

were but 60 Native Indians remaining in the entire island of Puerto Rico. Yet when the Earl of Cumberland, who had captured San Juan, fled the island, the King of Spain sent an armada, commanded by General Don Francisco Coloma, to re-conquer the colony in 1599, and was surprised to find the city of San Juan inhabited almost entirely of Indians. (quoted in Steiner 1974: 17)

The one of most interest is the indio, or that of the descendants of inhabitants found on the island at its discovery and settlement. They form a great mass of the country laborers over the island, especially in the centre and northeastern section. They have much of the serious appearance of the North American Indian, with his high cheek bones, but their color is less red and more swarthy. (Harrington 1899: 174)

As a result with their battles with the Spanish, of disease and emigration to other islands, of hard labor in the mines, and other unaccustomed drudgery, the Native population of Puerto Rico rapidly disappeared, so that in 1543 it was reported to the King of Spain by the bishop of San Juan, that there were but 60 Native Indians remaining in the island. At this time there are few traces of them remaining, at least this census has not discovered any. Still in such matters no census can vie with the trained observer, and therefore attention must be called to the following statements of Captain W.S. Shuyler in a report on August 30, 1899: while work was being done on the roads, I had the occasion to watch crowds of 700 or 800 men gathered around the pay tables at Las Marias, La Vega, and Anasco. The frequency of the Indian type was very noticeable. While it is almost certain that there is today no single Indian of pure stock in PR it is equally sure that the type can be seen everywhere in the mountain settlements. At San German I noticed a woman whose color, hair, and features were true Indian as seen in the Southwest of the US. (Davis 1900)

El Yunque, where marked Indian features were casually observed everywhere, especially in the isolated mountainous regions, where the inhabitants still preserve Indian features to a marked degree. (Fewkes 1970: 24-5)

Today there no pure Taínos... Mestizos are found in the rral towns of Oriente plateau in Cuba, also in the woods of El Yunque massif on Puerto Rico. (Lovén 1979: 499)

...the Taínos were a people that long ago became extinct. Such relics in the form of objects still used, or ancient superstitions occurring in folklore, as may still be found among their mestizo "descendants" in the Yunque Rainforest, of Oriente in Cuba, or among the Negro interbred population of the Dominican Republic. (Lovén 1979: 657)

Puerto Rican Identity

As a native from the Dominican Republic it feels awkward for me to speak on Puerto Rican identity. Identity for the most part is a personal issue. That said, it could be assumed that all identities are created. For example, there were no Dominicans or people identifying with being Dominican 164 years ago, when the Republic was formed and the island renamed. How long did it take before people began calling themselves Dominican? The same can be said for Puerto Rican identity.

People who identify with their Taíno ancestry are in fact reidentifying with a sense of self, a consciousness that was long ago suppressed due to historical inaccuracies

and local politics. That sense of “I am from here” is an indigenous sentiment that should be extended to anyone identifying with the Spanish or African components of this tripartite nation of people. From an early age people associate with the cultural icons around them, and before it is “revealed” to them that they are Puerto Ricans, they already know. In the past, however, native customs, linguistics, and material culture were never clearly defined as native, certainly not in schools or popular literature. When they are, people begin to take a deeper look into their past and identities. Some realize that perhaps their connection to the classic Taíno is stronger than what they have been led to believe by academics.

It is indeed perplexing for many Puerto Ricans who relate to certain Taíno cultural practices, such as casabe bread making for example, only to be ridiculed for identifying with the very people who contributed this custom to us. But people today are asking concrete questions about our historical past and making connections not just culturally but now also genetically with our Taíno ancestors. This phenomenon may appear new, but it is not. It has been brewing for quite some time.

The persistence of a Taíno genetic component in contemporary Dominican life, along with the survival of certain undeniably indigenous beliefs and traditions, requires the recognition of a native substratum in our midst today (García Arévalo 1990: 275). This observation not only applies to the Dominican Republic and Cuba, but to Puerto Rico as well. Fortunately, many young scholars, some of whom are of Caribbean/Puerto Rican descent, are taking a closer look at our histories and are asking new questions and questioning old answers.

Conclusion

If we, as if by magic, were to extract all things Taíno, including the names of flora and fauna, place names, culture, and customs from the Spanish Caribbean, would we still be the same unique people we are today? Indeed, it would be interesting to find another “extinct” culture that has influenced the language and material culture of another as much as the classic Taíno have. We can conclude that if we could extract all things native from the island, we would be unrecognizable as Puerto Ricans, Cubans, or Dominicans. Of course, it can also be argued that if we extracted the Spanish and the African influence we would not be the same people either. But guess what? We would still be indigenous, which is the point that those involved with Taíno reclamation and reidentification have been trying to express all along. Embracing the Taíno does not imply a hatred for the Spanish or racism toward the African, far from it. After all, if the classic Taíno were a mixture of many different ethnicities—and they were—then nothing has really changed. We continue to be a people of mixed blood.

It is a fact that at least 61 percent of the Puerto Rican population has mtDNA that is native, and mostly of Taíno extraction. Does this mean that all Puerto Ricans are Indians? No, but it does suggest that people who identify with their native roots should be taken as seriously and with as much respect as anyone claiming African or Spanish descent. Imagine how many folktales, home remedies, oral traditions, etc. have disappeared simply because when the word “Indio” is attached to them, they somehow lose their validity and thus are rendered unauthentic. This is shameful, considering how many Puerto Ricans claim to have a grandmother or grandfather who identified strongly with their Taíno roots.

Taíno ancestry, culture, and customs have always been with us. It is time to elevate the Taíno to their proper place in history. Our ancestors contributed many things that are central to us still to this day. It should not come as a surprise that we also have a

genetic connection. Taíno self-identification is on the rise. It is not going to go away. It is time to take a serious look into this phenomenon. Perhaps it is also time to look into the phenomena of staunch denial and opposition of all things native on the island. This statement below by Toni-Ann Ramos (1995: 82–3) sums it up best:

It is true that much of the Taíno culture has been lost due to destruction by the conquistadors or absorption into the dominant Puerto Rican culture. The latter observation is often unknown, however, even by Puerto Ricans themselves who have been conditioned to believe that the Tainos were completely wiped out. It is my contention that Taíno customs and beliefs provide the extensive roots of Puerto Rican culture. Only by nourishing these roots with recognition and preservation can the Puerto Rican people nurture a strong positive self-identity.

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