Out of Africa? Americans search for ancestry

By Camille Feanny
CNN

ATLANTA, Georgia (CNN) -- Tina Dunkley has spent decades trying to discover her roots.

But like most African-Americans, she was finding that the search for family history is not so simple. The legacy of the slave trade, and sketchy records from the sale and transfer of Africans throughout the United States, makes the hunt for ancestors a daunting task.

Now Dunkley and thousands of other African-Americans are turning to science like DNA technology to unlock the portals to their past. She says that it is worth all the effort.

"You have all these unknowns, these blanks that you want to fill," she says. "I liken it to someone trying to find their birth parent, you just want to know."

Digging for ancestors

Experts say that DNA analysis gives people a map of their ancestral lines. People are flocking to private genetics companies and university-based studies to find clues about their history.

"There are a lot of standard genealogical tools a person can use to find their ancestry here in the United States," said Gina Paige, president of African Ancestry, a firm specializing in African genealogy.

Other companies like DNAPrint Genomics give clients a breakdown of the racial percentage of four major groups: African, European, American Indian and East Asian.

At African Ancestry, scientists take a DNA sample with swabs from a client's cheek, sequence it, and then compare those results with those in their database, Paige explained.

They can trace over 21,000 indigenous African tribal lineages representing around 30 African countries and 135 ethnic groups.

The costs for DNA analysis varies widely -- from around $150 to thousands of dollars -- depending on the type of search and how deep someone digs.

Because of the variables involved to conduct an ancestral search, researchers say some homework is required.

Scientists warn that although a DNA search can open some of the doors to the past, people should not expect it to provide all the answers.

"There's a very, very great misconception among people who read about DNA technology that it's a magic bullet and it's not," said Dr. Bruce Jackson, a molecular geneticist at Boston University's School of Medicine and founder of the African-American DNA
Roots Project. "It's a very powerful tool and probably the most powerful in terms of human identification, but it's not the only tool."

Begin at the beginning

So where to start?

Scientists like Jackson say that although DNA searches help fill in pieces of a complex puzzle, anyone seriously interested in finding their roots should begin by speaking with the living members of their family tree, like their parents, grandparents and other relatives.

"We can't just be traipsing all over Africa looking for groups," says Jackson. "If you have an idea of your parental lineage, it really helps to focus on where we should look genetically."

Experts say beyond DNA, there are traditional genealogical tools to reassemble your heritage. Although African-Americans were recorded as property before the mid-1800s during the slave trade, digging through old family bibles, birth or death certificates, medical records and legal documents like property deeds will provide good background data.

Also, government documents housed in the Library of Congress, and religious organizations like the Mormon Church, may be able to assist in a person's search.

There's another reason why family records are a critical first step.

Scientists caution that just because people's features look "African-American" does not mean that their ancestry will necessarily lead back to Africa.

They say that unlike other ethnic groups whose links to continents like Europe and Asia are more direct, DNA companies like African Ancestry are finding African Americans' family trees can branch out to a variety of groups, including Europeans, Native Americans and others.

Security and privacy

In the current climate of high security concerns, questions arise about what is done with a person's DNA after a test is completed.

It depends on who is doing the study and for what purpose.

Paige of African Ancestry said most corporations hold a client's biological sample for just a short period of time, and all materials and results are kept strictly confidential.

"When the DNA is in our lab, it is only identified as a barcode number, so there is no personal information associated with the sample when it's in the hands of the people that are processing it," she said. "We commit to destroying and disposing of the DNA once we've found a match."

But in long-term research projects -- such as public health studies -- a university may hold a client's DNA for an extended period for analysis and comparison against other samples. So scientists caution that people should be aware of how their genetic samples will be used, and how long they will be kept before they agree to the test.

Africans in America

One group participating in such a long-term genealogical study is the Gullah/Geechee Nation of South Carolina -- a group thought to have clear African ancestry as a result of their relative isolation on islands off Georgia's coast during and after slavery.

The African-American DNA Roots Project, launched by Jackson of Boston University and Bert Ely from the University of South Carolina, seeks to link African-Americans like the Gullah/Geechee to particular West African tribes using DNA analysis.

Scientific results indicate that the Gullah's genetic lines were not traced back to just one African country, but spanned across several countries on the continent. They also determined that the people have much less European ancestry compared with other African-Americans.
This helps to explain the preservation of much of their language and culture.

Queen Quet, chieftess of the Gullah/Geechee Nation, said "We know at least through historical records that West Africa is where our roots are, so now to narrow it down to specific countries for each family is the key."

CNN writer Tiffany Campbell contributed to this story.

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