



Kate Spradley, director of Texas State's Forensic Anthropology Research Facility, helped the Smithsonian put a face on a young slave who lived in pre-Revolutionary War Maryland.

Biography written in

BONE

The young woman from Harleigh Knoll

by Ann Friou

In October 2004, an excavation team from the Smithsonian National Museum of Natural History (NMNH) made a rare discovery in Maryland.

The finding of African remains at several colonial settlements offered new proof that English and African colonists lived and died alongside each other, as they struggled to survive in the earliest years of American settlement.

One discovery in particular, that of a young African woman buried at the coastal tobacco plantation of Harleigh Knoll, offered the team the opportunity to learn more about the African experience in the Colonies. >

The team called in Kate Spradley, director of Texas State's Forensic Anthropology Research Facility, to look at the remains and construct a "bone biography" of the young woman. The biography is part of a major exhibit, "Written in Bone: Forensic Files of the 17th Century Chesapeake," at the NMNH in Washington, D.C., through Feb. 6, 2011.

To Spradley, a forensic anthropologist whose research has focused on tracing the history of Africans' migrations from Africa, reading the bones of an unidentified person of African ancestry is like reading a book. Even after flesh and facial features are gone, Spradley uses skeletal evidence to answer questions such as Who was this? What did

blacks were buried side by side. The young woman's skeleton was found partially exposed in the remains of a wooden coffin; by contrast, the European settlers were usually buried in cast-iron coffins. The young woman was 17 to 19 years old and lived on the plantation sometime between 1720 and 1750, when the slave population in the Chesapeake was rising. Her skeleton tells of a hard life of physical labor: Back trauma is evident in her vertebrae, along with heavy use of muscles that deeply pitted the bones of her upper body. Spradley's measurements of the woman's cranium show that she had come from the West African coastal area now known as Ghana.

"The fact that she is African and shows so many signs of hard labor supports the hypothesis that she was a slave," Spradley said. "When you compare the bones of Africans to the bones of Europeans found at the same time, the difference is striking. It's clear who's doing all the work."

Until recently, Spradley added, African-American archaeological and biological histories have been largely overlooked. "African-Americans' individual stories are important to us because those individuals helped build the American Colonies and the United States," she said. "Forensic anthropologists' work gives African-Americans of the past a voice, and it yields information we can learn from and give back to the present-day African-American community."

Because the young woman's skull was so well preserved, the Smithsonian asked a forensic sculptor to reconstruct the face for the exhibit.

Lonnie Bunch, director of the Smithsonian's National Museum of African-American History and Culture, said, "That face makes this story accessible. That face doesn't allow you to turn away from a past that you might find difficult. It really brings the bones back to life."

The exhibit features additional bone biographies that Spradley helped to construct. For example, African burials on Jamestown Island, Va., were clearly unlike those of English colonists, but they were not at first positively identified as African. Three burials lay in drainage ditches rather than in the church cemetery where English colonists were buried, and another was found resting on its side, differing from traditional Christian burial. Spradley helped to



Kate Spradley, right, obtained important information about Africans in the American Colonies by examining skeletal remains, including those of "the young woman from Harleigh Knoll." The young woman's facial reconstruction, by forensic artist Joanna Hughes, left, is part of the current Smithsonian exhibit, "Written in Bone." Photo by Darren Hughes

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she look like? How did she live, and how did she die?

"There is still so little we understand about being African in Colonial America," Spradley said. What we do know is that the first Africans in the Chesapeake arrived in 1619, as servants or slaves. Some gained their freedom, but that didn't last long. By the 1660s, plantation owners had turned to race-based slavery for inexpensive labor and increased profits.

While the young African woman's cause of death remains a mystery, her bones were relatively well preserved and yielded certain information to Spradley. At Harleigh Knoll, Spradley said, the remains of whites and

confirm that the burials, originally believed to be Native American, were of African males and females.

The skull of one of the males had lesions caused by syphilis, and a gunshot wound. “It was probably a mercy killing,” Spradley



Sculpted bust by StudioEIS based on a forensic facial reconstruction by forensic artist Joanna Hughes. The skeleton of this young African woman was recovered during an archaeological excavation in Talbot County, Md. Photo by Chip Clark, Smithsonian Institution

said. “Judging by the lesions in the skull, the syphilis had taken over and the man had gone insane.”

Spradley also found evidence that the West Africans in the Colonies were less well nourished than their predecessors in Africa.

“West Africans typically have a skull that is short in length from front to back and a very tall cranial vault,” she said. “The tall cranial vault indicates that a person has a good diet and is thriving. When West Africans came to America, the height of their cranial vaults dropped significantly, indicating that they weren’t doing so well during growth and development. It’s only post-Reconstruction that the cranial vault begins to rise again.

“The first West Africans in America were genetically a homogeneous group,” Spradley continued. “But once they were in the Colonies, a transformation took

place over the next 200-300 years, so that we now have an African-American population with a very different genetic structure. African-Americans are now anywhere from zero to 50 percent European. Both the genetic and environmental changes are reflected in the skeleton.

“Some people would argue that the change is all genetic, but the European colonists at Jamestown also have very low cranial vaults that are long from front to back. They often came from poor areas of England, and, over the same 200-300 years, we’ve seen Anglo-Americans’ cranial vaults become taller, as well as shorter from front to back. I find this very curious.

“We’ll perhaps never know how to tease apart the environmental from genetic changes,” Spradley concluded, “but it’s fun to try to figure things out and to tie them to historical events. With the African Diaspora, you have such a well documented historical event.”

A video describing Spradley’s forensic work and the reconstruction of the young African woman’s face is available at <http://anthropology.si.edu/writteninbone/videos.html>.

Information about the exhibit “Written in Bone: Forensic Files of the 17th Century Chesapeake” is available at <http://anthropology.si.edu/writteninbone/index.html>. ★

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Collecting the bone biographies of migrants

A forensic anthropologist who looks for personal histories in bones, Kate Spradley is interested in human migrations – where people come from and how the environment and genetics affect their skeletal structures. Her research is useful in studying worldwide migration histories.

In the United States, the methods that forensic anthropologists use to ascertain a skeleton’s ancestry, however, are valid only in identifying white or black people, Spradley said. “We have no methods for identifying people of Hispanic origin,” she explained, “which causes a problem for law enforcement when Hispanics die here.”

Hispanics comprise the largest minority in the United States, and Spradley has received a grant from the National Institute of Justice to develop methods for identifying Hispanic individuals. Over the next two years, Spradley and a colleague at the University of Arizona will collect data from border-crossing fatalities – cranial measurements, dental X-rays and DNA samples – to create a database to be used by forensic anthropologists in making positive identifications.