Catoctin Furnace Historical Society, Inc.

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DNA Connects 40,000 Living Americans to Enslaved Black Ironworkers

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For millions of Americans who are descended from enslaved Africans, genealogical research often hits a dead end at the era of slavery because there were few written records of enslaved people's lives. That has now changed for thousands of Americans who are descended from 27 enslaved workers who were buried at the Catoctin Furnace iron forge in the state of Maryland, USA.

Published August 4th in the journal *Science*, researchers from Harvard University, the Smithsonian Institution, 23andMe, and the Catoctin Furnace Historical Society analyzed the DNA of the remains of 27 individuals buried at Catoctin Furnace and compared it to people who have submitted their DNA to genetic genealogy databases.

The results revealed how the 27 individuals at Catoctin Furnace were related to each other, genetic conditions they may have had, and their African ancestors and American descendants.

Elizabeth Anderson Comer, CFHS President: "The search for a descendant community has been the principal quest of CFHS for more than a decade. Catoctin Furnace is an example of the tragedy of slavery writ large: namely, the erasure of the black population and collective heritage from the area, manifest in the lack of an identified descendant community. This latest research has the potential to identify individuals and reconnect this lost legacy of skilled ironworking."

The research compares novel ancient DNA technology, which sequences genetic data from human remains to data from consumer genetic testing services, to establish relationships between the enslaved African Americans at Catoctin Furnace and modern Americans. The new method was developed by a team led by David Reich, professor of genetics in the Blavatnik Institute at Harvard Medical School and professor of human evolutionary biology at Harvard, and first author Eadaoin Harney, a population geneticist at 23andMe. Until now, it has been difficult to trace family lines from enslaved people because of the absence of birth and death certificates and census listings. Before this research, there were no known descendants of the enslaved ironworkers.

By comparing the genetic profiles of the 27 Catoctin Furnace workers to millions of American DNA profiles, 41,799 relatives were identified. Of those, 2975 participants were found to be close

relatives of the Catoctin Furnace workers. The results have a profound impact on our understanding of the history of enslaved Africans and their descendants.

The research also shows that the people buried at Catoctin Furnace were descended from people in West and Central Africa, particularly the Wolof and Mandinka of Senegambia and the Kongo of Central Africa. Fifteen of the Catoctin workers were part of five genetic families who were buried close together.

Elizabeth Anderson Comer, CFHS President: "This research may increase our understanding of knowledge transfer of ironworking skills from the continent of Africa. For example, well over forty thousand smelting furnaces have been counted in one eighty-kilometer section of the Senegal River Valley in Mauritania, illustrating the prevalence of ironmaking. These results may inform future research linking knowledge transfer of ironworking to the colonies, that was then exploited by owners who realized great wealth and power for themselves."

The Catoctin Furnace study moves genetic research into African American family trees forward and helps to right some of the historical wrongs that were created by the trans-Atlantic slave trade.

Catoctin Furnace was built in 1774 by four brothers, James, Baker, Thomas, and Roger Johnson, to produce iron from the rich deposits of hematite found in the nearby mountains. The iron furnace at Catoctin played a pivotal role during the Industrial Revolution in the young United States; American cannonballs fired during the Battle of Yorktown came from here. The furnace supported a thriving community, and company houses were established alongside the furnace stack. Throughout the nineteenth century, the furnace produced iron for household and industrial products. Catoctin Furnace ceased production in 1903.

In 1973, The Catoctin Furnace Historical Society, Inc. was formed by G. Eugene Anderson, Clement E. Gardiner, J. Franklin Mentzer, and Earl M. Shankle to "foster and promote the restoration of the Catoctin Furnace Historic District...and to maintain the same exclusively for educational and scientific purposes," as well as "to exhibit to coming generations our heritage of the past."

Catoctin Furnace maintains much of its original layout and structures, which were constructed primarily between 1774 and 1820. The village introduces visitors to the area's historical importance and heritage resources, providing the look and feel of an early industrial complex yet retaining the freshness and charm of a small community at the foot of Catoctin Mountain. It is located 12 miles north of Frederick on Maryland Route 806 (Catoctin Furnace Road). For more information, call 240-288-7396 or visit www.catoctinfurnace.org.