

New DNA analysis helps bust 200-year-old royal conspiracy theory

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Portrait of Kaspar Hauser by Johann Friedrich Carl Kreul. Credit: Wikimedia Commons

A new genetic analysis by an international team of scientists has helped bust a popular 200-year-old myth surrounding Kaspar Hauser, whose identity became one of the most mysterious riddles in German history. The study is published in *iScience* as a [pre-proof paper](#).

Kaspar Hauser was a youth who seemingly appeared out of nowhere in Germany in 1828, claiming he had grown up in captive isolation in a dungeon, looked after by a mystery man he never saw. Unable to speak or write, he carried an anonymous letter stating he had been kept in total isolation since he was a baby.

The story captured the public's curiosity, making Hauser a celebrity. This attention increased when the King of Bavaria, Ludwig I, ordered that he be guarded day and night for his protection. This fueled speculation that his true identity could be that of a descendant of the House of Baden.

Royal conspiracy theory

The "Prince theory" was that Hauser could be the son of the Grand Duke Carl; that he was kidnapped and swapped as a newborn, being replaced by a fatally ill baby that died when only a few weeks old. This would have framed Hauser as the rightful heir to the throne and altered the lineage of the House of Baden.

Historians have debated over the mystery of Hauser's identity ever since, and as DNA fingerprinting technology emerged in the late 20th century, scientists have joined the efforts to solve the riddle.

However, multiple DNA analyses of hair and blood samples obtained from his clothing performed over the last 30 years have provided conflicting results. Due to doubts about the authenticity of the clothing or that it may have been contaminated by museal procedures, it was decided to do an new independent study in the 2000s.

Limitations in sampling and technology at the time mean the results were ambiguous. This study carried out new sampling using much newer techniques.

New forensic methods

Now a team of scientists, including Professor Turi King, who is Director of the Milner Center for Evolution at the University of Bath and renowned for her work leading the identification of King Richard III, have used advances in forensic methods that allow much smaller fragments of ancient DNA to be analyzed.

The improved sensitivity of the techniques meant they could analyze the DNA from hair strands individually instead of pooling samples, checking the sequences matched and improving the accuracy of the results.

They also compared their results with previous research using [blood samples](#) taken from Hauser's clothing displayed at the Kaspar Hauser museum.

The team analyzed traces of mitochondrial DNA (mtDNA), which is passed down the mother's line, and were able to prove unambiguously that Hauser's mtDNA type did not match that of members of the House of Baden.

Professor Turi King is an expert in the analysis of ancient DNA and genealogy. Previously based at the University of Leicester, Prof King led the research team that identified the remains of King Richard III after they were discovered in a carpark in the city. She co-presents the BBC Two series DNA Family Secrets, which uses DNA technology to solve family mysteries around ancestry and missing relatives.

She said, "After death, our DNA degrades into shorter and shorter fragments until there is nothing left to sequence. The DNA analysis methods available in the 1990s and early 2000s worked well with long DNA fragments, but didn't give consistent results when they did DNA

analysis of the various items from Hauser.

"It's really exciting that we have been able to use the latest methods to finally answer the question and rule out the Prince theory.

"So, I've worked on two cases involving potentially identifying members of a royal family: Richard III and Kaspar Hauser. One where we proved the identification of a [king](#) and one where we proved someone wasn't a prince.

"In both cases they were mysteries that have carried on down through the centuries and I love that science can be brought to bear to answer them."

However, the true identity of Kaspar Hauser remains a mystery.

Professor King said, "Sadly our data still can't tell us who he was! His mitochondrial DNA type is one that's West Eurasian but we can't narrow it down to a geographical region.

"So, he still remains an enigma in terms of his origins."

More information: Walther Parson et al, Kaspar Hauser's alleged noble origin – New molecular genetic analyses resolve the controversy, *iScience* (2024). [DOI: 10.1016/j.isci.2024.110539](https://doi.org/10.1016/j.isci.2024.110539)

Provided by University of Bath

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