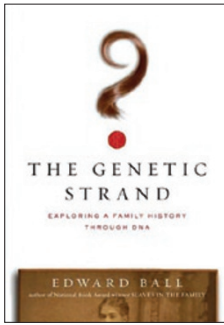


## Hairs and heirs

**The Genetic Strand: Exploring a Family History Through DNA**

By Edward Ball

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Reviewed by Philip R Reilly

Beginning with *Slaves in the Family*, which won the National Book Award in 1998, Edward Ball, a son of the deep South, has written several critically acclaimed works, each in some way dealing with history of race in America. His latest work, *The Genetic Strand: Exploring a Family History Through DNA*, recounts how he used the tools of twenty-first century molecular biology to probe his ancestry. Although he did not set out to do so, the inquiry led him to ask questions about some of his long-dead relatives that, almost certainly, they would not have approved of.

The book would never have been written but for the chance discovery of nine locks of hair, each enclosed in a small packet labeled with the name or initials of the person from whom they were snipped in the middle of the nineteenth century. Ball found them in the secret compartment of an old family desk, one of several pieces that had belonged to an elderly cousin named Jane Gilchrist. The furniture, which had passed like mitochondrial DNA from her great-grandmother to Jane, had originally been part of the household at Limerick, an ancient rice plantation near Charleston. The Ball family had been planters, and well before the Civil War, Limerick was the patriarch's home. At Jane's death, the furniture passed to her brother, who had neither the space nor the interest in providing stewardship over it for another generation. Edward Ball bought it.

After he discovered the packets of hair, Ball set out to determine who started the collection and from whom the strands had been taken. But it was only after his mother's death a short time after he bought the desk (which Jane had said was known as 'the plantation office') that Ball began to focus on these Victorian heirlooms and to wonder what, if any, new knowledge might be garnered from DNA analysis.

During the two centuries in which it was an important part of Charleston planter aristocracy, the Ball family generated a substantial number of documents (deeds, letters, wills, photographs) that, along with oral history, provided its descendants with a sense of their ancestry that comported with the canonical Southern family—snow white, and dedicated stewards of the land and slaves they owned. As he perused letters, pondered dates of births, marriages and deaths, and studied old photographs, Ball unearthed

information that seemed to contradict bits of the family history. He began to ask what his ancestors would have found to be unsettling questions. Was this individual part Native American? Was this woman part African? Was this child actually the offspring of someone else in the family?

Ball used commercial and university-based labs in the United States and Europe to see whether DNA could be extracted from the hair and analyzed to shed light on questions about race admixture, paternity and place of origin. As he recounts his DNA sleuthing, he at times seems almost obsessed with the lives of people who lived five or six generations earlier (and with whom he shares relatively few genes). I will not spoil the read by disclosing what Ball learned from analyzing the hairs, but I will caution that the book will appeal more to those who enjoy genealogy than it will to others.

This slim volume has a deceptively complex but aesthetically pleasing architecture. Like the composer of a complex musical score, Ball introduces several themes, leaves each for a time, returns, and meticulously weaves them into a complete tapestry. For example, at various points he diverges from the family story to discuss landmarks in the history of genetics. He provides brief summaries of Miescher's isolation of nucleic acid, Davenport's creation of the Eugenic Record Office, and Jeffreys' discovery of short tandem repeats.

Because it is exceedingly difficult to keep track of all the relatives and their complex relationships, and because on one occasion he may have misstated one, I was disappointed that the book does not include a nicely organized family pedigree. It would greatly ease the work that a serious reader must do to follow the story at its deepest level.

Although I had noticed the occasional comment criticizing the practice of molecular biology, I was blindsided by the final chapter, which is a superficial, weakly argued and poorly supported critique of genetics. I will let two of Ball's comments support my claim. First, he states that "It's regrettable that molecular biology can see so many messages where none are written, as though it's hungry for higher status and thinks it can deliver concrete truths....Genetics can't support the desires people bring to it, yet the science of genes thinks it's good public relations to portray itself as omniscient. In two years of reading, I never encountered a researcher who acknowledged a mistake." And second, he writes: "One grows tired of experts on the secret of life who promise to name genetic causes for cancer, heart disease, or whatever ailment will trap the richest grants. They condescend to people, even as they collect public research money."

Ball may be the most skilled of the many writers who have contributed to the steadily growing corpus of books about DNA generated for the general public. He is adept at mastering the basics of genetics, and he generally provides his readers with accurate explanations of topics such as inheritance patterns, population genetics and DNA forensics. His considerable talent renders the sophomoric critique of genetics with which he concludes disturbing. Much of the final chapter is a cranky afterthought that has little to do with the central story. His editors should have persuaded him to delete it.

Philip R. Reilly is at 145 Monument Street, Concord, Massachusetts 01742, USA.

email: preilly46@comcast.net.