

Supplementary Materials for

**Identifying a living great-grandson of the Lakota Sioux leader
Tatanka Iyotake (Sitting Bull)**

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Supplementary Figures and Tables

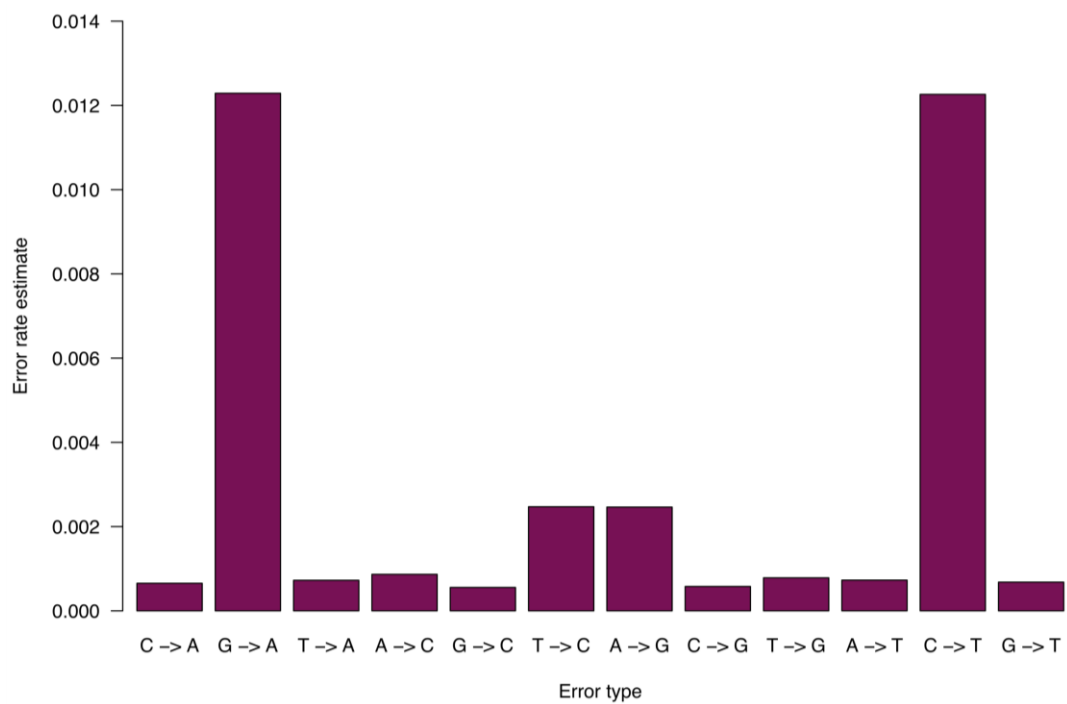


Fig. S1. Error rate estimates for the Sitting Bull sequencing data for each possible error type.

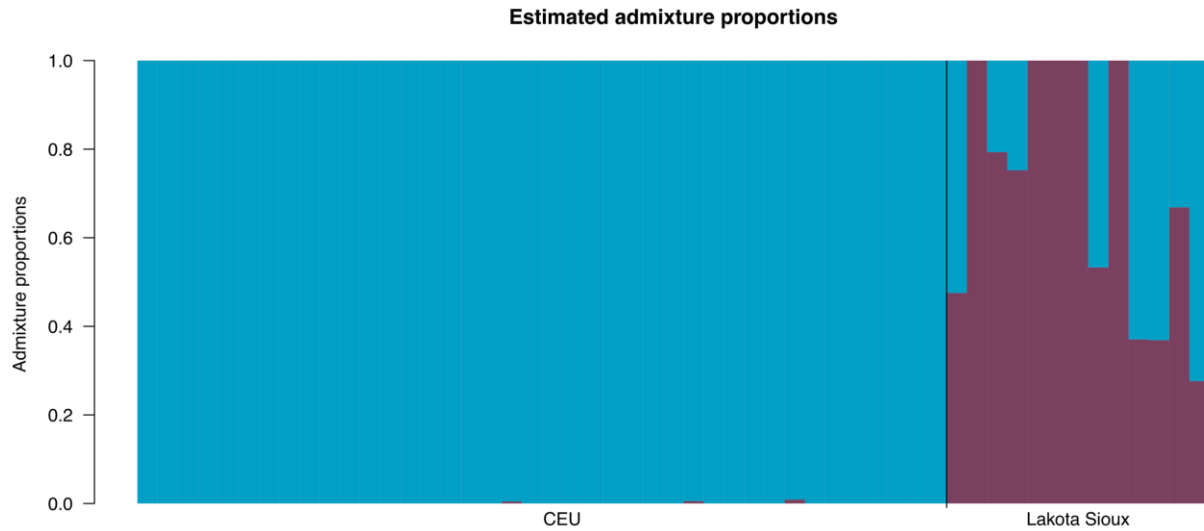


Fig. S2. Results of an ADMIXTURE analysis of SNP chip data from 13 Lakota Sioux individuals merged with data from 40 European individuals from the 1000 Genomes project. The analysis was performed assuming the number of ancestral populations, K , is 2. Ernie LaPointe is among the 5 Lakota Sioux individuals that are estimated to not have any European ancestry.

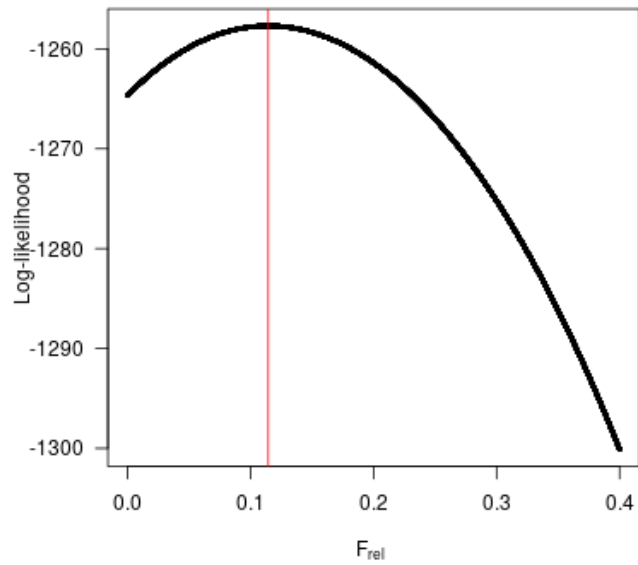


Figure S3. Log-likelihood curve for F_{rel} when analysing data from Ernie LaPointe. The black curve shows the log-likelihood for F_{rel} values ranging from 0 to 0.4. The red vertical line indicates the value of F_{rel} that maximizes the log-likelihood.

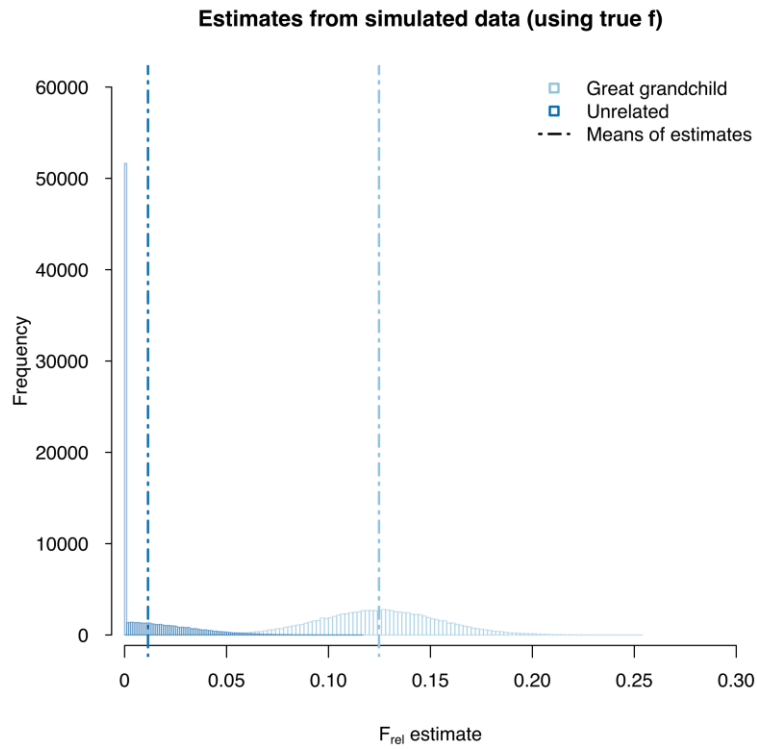


Fig. S4. Simulation results based on data from the same number SNPs on average as in the real data analyses. Estimates of F_{rel} obtained using the true underlying allele frequencies that the simulations were based on.

Sitting Bull's Wives	Light Hair (?-1857), married 1851-1857	Snow on Her (ca. 1829-1893) married ca. 1860-1870	Red Woman (ca. 1840-1871) married ca. 1860	Seen by Her Nation (1848-1897) married 1872-1890	Four Robes (1850-1829) married 1872-1890
Sitting Bull's Children	One, deceased	Several, all deceased	One, deceased	Two, both deceased, including the grandmother of Ernie LaPointe Standing Holy (1876-1927)	Several, all deceased
Sitting Bull's Grand-children	None	Several, all deceased	None	Several, all deceased, including the mother of Ernie LaPointe Angeline Spotted Horse (1903-1959)	Several, all deceased
Sitting Bull's Great Grand-children	None	One known, deceased	None	Several, living are Ernie LaPointe and his sister	Several, all deceased

Table S1. Overview of Sitting Bull's wives and biological descendants through three generations and his relationship with Ernie LaPointe. The latter, i.e. the family lineage related to Ernie LaPointe, is highlighted in bold.

Lakota Sioux individual	<i>F_{rel}</i> estimate
Ernie LaPointe	0.1143
Reference individual 1	1e-12
Reference individual 2	1e-12
Reference individual 3	0.001997
Reference individual 4	1e-12

Table S2. *F_{rel}* estimates obtained for Ernie LaPointe and the four reference individuals.