

Unraveling Old Secrets: Analysis of Genetic Remains from 1742

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In 1946, the remains of two individuals were found on an islet off the coast of Senja, Norway. The remains, one male and one female, had evidence of being executed, with damage to the vertebra and the skull of the female body being missing. This reignited interest in a murder case from 1733. Two siblings were in 1742 sentenced to execution by beheading for the murder of the husband of one of them. With the aim to provide an identification of the highly degraded samples, we employed a range of genotyping methods including whole genome sequencing, capture hybridization and imputation.

With the aid of Lenvik historielag ten distant relatives from the mentioned siblings were identified and genotyped using a SNP-microarray. In addition, we genotyped 35 individuals of Norwegian ancestry in order to obtain genotype frequencies from the Norwegian population and compare it to data obtained from the 1000-Genomes project.

We used a variety of biostatistical approaches to find a link between the remains and living relatives. We will provide preliminary results illustrating the power of genetics to resolve genealogy questions and to shed light on a decades-old mystery with implications for the identification of badly degraded samples.