

The putative skull of St. Bridget can be questioned

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The putative skull of Saint Bridget (Birgitta) of Sweden that has been kept in a shrine in Vadstena Abbey is probably not authentic. A new study conducted at Uppsala University reveals that the two skulls, believed to be from Saint Bridget and her daughter Catherine (Katarina), is not from maternally related individuals. Furthermore, dating show that the skulls are not from the time period when Bridget and Catherine lived. The findings are published in the journal *PLoS ONE*.

Vadstena parish assigned Associate Professor Marie Allen's research group at Uppsala University's Department of Genetics and Pathology the task of examining DNA of both skulls, in order to confirm kinship and authenticity. A sensitive method based on analysis of the maternally

inherited mitochondrial DNA was used to analyse the skulls. This method makes it possible to examine very small amounts of DNA, and it is often a successful analysis on aged and degraded material.

Saint Bridget of Sweden lived between 1303 and 1373, and was canonized in 1391. In 1999, the Pope declared Bridget one of Europe's Patron Saints. According to the legend, the skulls of both Bridget and her daughter Catherine (1331-1381) have been kept as sacred relics at Vadstena Abbey, located in central Sweden. Bridget was renowned for her revelations, prophecies and pilgrimages. After her death, her remains were taken from Rome to Vadstena, where they were placed in a shrine in 1381. Through the years, small pieces of the relics were selected and given to churches, monasteries, kings and popes. Currently, the shrine in Vadstena contains two skulls, as well as 23 other bones. Among these, a femur bone is thought to be from Saint Bridget. A third [skull](#) that was stolen from Vadsrena in 1645, is now in an abbey in Holland. An anthropological and archaeological study from the 1950s concluded that the two skulls that remains in Vadstena probably are from two women, aged between 60-70 years and 50-55 years, respectively. This corresponds well with the theory that the skulls in the Vadstena relic shrine could be from Bridget and her daughter Catherine.

The scientists analysed small pieces of the skulls and concluded that both skulls are female by a nuclear DNA-analysis. Moreover, a maternal relationship can be excluded by analysis of mitochondrial DNA. There were indications of a difference in the preservation of the DNA, which could be due to an age difference between the skulls. Therefore, Professor Göran Possnert at Uppsala University's Tandem Laboratory performed further testing, using advanced radiocarbon dating (C-14) technology. The results confirmed those obtained by the DNA analysis.

"One skull cannot be attributed to Bridget or Catherine as it dates back to the period 1470-1670. The other skull, thought to be from Saint

Bridget, is dated to 1215-1270 and is thus not likely to be from the 14th Century when Bridget lived. It cannot, however, be completely excluded that the older skull is from Bridget if she had a diet dominated by fish, which can shift the dating results. But this is unlikely," says Göran Possnert.

"The results from both methods support each other. Our DNA analyses show that we can exclude a mother and daughter relationship. This is also confirmed by the dating as a difference of at least 200 years between the skulls is seen," says Marie Allen.

More information: www.plosone.org/

Provided by Uppsala University

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