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**"What happened to the Viking settlement of Greenland?"**

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New research shows cooling weather not a factor

It has long been held to be a fact that the Viking settlement of Greenland must have been dictated by climate conditions. Weather must have been significantly warmer in Greenland in the late tenth century, when the Vikings arrived. Greenland must in fact, have been green! By the same logic the demise of the Norse settlement of Greenland in the 14th century would have been due to changing climate conditions, cooling weather and advancing glaciers which made the once green Greenland too cold for the Norse settlers.

Medieval warm period did not extend to Greenland

New research challenges these theories. According to a new study the “Medieval warm period”, a period of higher temperatures, which coincides with the Norse settlement of Greenland, from the mid-10th century to the 14th century, was not a global phenomenon. Some parts of the world, including Greenland, did not experience a warmer climate during this period.

Scientists led by Nicolas Young at Columbia University have concluded the climate in Greenland was already cold when the Norse arrived, no warmer than it was when the Norse colonies were abandoned some 400 years later.

The study, whose findings are published in the journal Scientific Advances, analysed isotopes in boulders in southwest Greenland and on neighbouring Baffin Island, which recent archaeological studies indicate might also have been occupied by Viking settlers. Analysing the isotopes allows the scientists to determine when the rocks were deposited by the glaciers, thus charting the advance and retreat of glaciers in the region with more precision than previously. This analysis showed that the glaciers had extended as far during the period of Norse settlement as they did later – thus indicating it was as cold at the beginning of Norse settlement as it was the settlement came to a close, a strong argument against the idea that changes in temperature were the determining factor in the fate of the Norse settlement.

The mystery of the Norse colonies on Greenland

Greenland was settled by Vikings from Iceland in the 10th century, beginning with the voyage of Erik the Red from Breiðafjörður bay in west Iceland in 985. The Norse settlement was concentrated in two main settlements. The larger settlement, Eystribyggð (e: Eastern settlement) was near the southern tip of Greenland and Vestribyggð (e: Western settlement), near Nuuk, some 6-700 km (370-430 miles) to the north. A smaller Miðbyggð (e: Middle settlement), slightly north of Eystribyggð has been discovered by archaeologists, but no written records exist about this settlement.

Norse settlement of Greenland

The Norse settlers in Greenland lived by raising livestock and hunting. Among the goods exported from Greenland was walrus ivory, which was high in demand in Europe at the time, due to the drying up of supplies of elephant ivory as the Muslim conquests of the Middle East and North Africa, which disrupted traditional trade routes. The best known medieval artwork carved from walrus ivory are the Lewis chessmen, which some think were carved in Iceland.

However, between 1360 and 1460 these once thriving colonies vanished. (Why were they abandoned?) Historians have assumed the primary reason for the disappearance of the Norse colonies in Greenland was the onset of the “Little Ice Age”, a period of colder weather which succeeded the “Mediaeval War Period.” This created a very neat narrative of the Norse settlement of Greenland as it seemed to coincide with the period of warmer weather: Good weather drew the Vikings to Greenland, and cold weather either killed or drove their descendants out again. The new research suggests this narrative does not hold up.

However, other explanations have also been offered. These include clashes with the Inuit population, soil erosion due to overgrazing, and the effects of the Black Death. As the plague swept over Europe large areas of prime agricultural lands were left abandoned, including in Iceland and Scandinavia. The Norse inhabitants of Greenland could simply have returned to their lands of origin. Another explanation is the decline in demand for walrus ivory in the mid-13th century, as elephant ivory became available in Europe once again.

Most likely the real story behind the end of the Norse colony in Greenland is a complex interplay of all of these factors.

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