

Tracing the Impact of Climatic Events through Isotopes

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The middle of the first millennium AD in Scandinavia is marked by significant changes in the archaeological record. The changes have been interpreted in various ways, sparking an ongoing debate in Swedish archaeological research about their cause, a debate that has persisted from the early 20th century to the present day. Recent studies have suggested that a long-lasting cold event, which was caused by several volcanic eruptions and referred to as the AD 536 event or Fimbulwinter or Late Antique Little Ice Age (LALIA), was the prime cause for the observed changes in the archaeological record during this period in Sweden. The proposed impacts of this climatic event include crop failure and spread of diseases, which lead to famine, population decline and settlement abandonments.

My PhD project focuses on examining the impact of the AD 536 climatic event on Swedish Iron Age societies. Specifically, the primary aim is to reconstruct the dietary and mobility patterns spanning from the Roman Iron Age to the Vendel/Viking period in Sweden, and to investigate whether any observed changes in these patterns could be linked to this climatic event. Furthermore, my thesis aims to understand which areas were most affected and to test whether their vulnerability or resilience was due to their dependence or independence on agricultural resources. Building upon previous research, the hypothesis posits societies heavily reliant on agricultural resources may exhibit greater vulnerability, whereas those with broader subsistence strategies might demonstrate increased resilience to climate fluctuations and to crop failures. Thus, to understand the full extent of this vulnerability or resilience requires determining the degree to which Iron Age societies in Sweden relied on agricultural resources, a subject that remains unclear and understudied.

As referred to above, the main focus of my thesis is the AD 536 event. However, the use of the plural "climatic events" in the title is intentional to encompass the subject of the second paper, which I will discuss during my seminar. In this seminar, I will also talk about my PhD project, the progress that has been made so far, and the plans for the future.