# Severe drought triggered barbarian invasions that destabilised Roman Britain



A recent study conducted by researchers from the University of Cambridge has shed new light on the causes behind the so-called “Barbarian Conspiracy” that shook Roman Britain around 367 CE. The research, published in the journal Climatic Change, connects a severe three-year drought with the subsequent increase in invasions and internal instability during this critical period.

Utilising tree-ring data from oak specimens in southern Britain and northern France, the team was able to reconstruct climate patterns spanning the fourth to sixth centuries. Their findings reveal that the summers of 364, 365, and 366 CE were marked by significantly reduced rainfall levels, far below what was needed to sustain the main crops of the time, such as spelt wheat and barley. While the average monthly rainfall during growing seasons from 350 to 500 CE stood at approximately 51 millimetres, these key years saw a drop to between 28 and 37 millimetres.

Professor Ulf Büntgen from Cambridge’s Department of Geography emphasised the severity of these conditions: “Three consecutive droughts would have had a devastating impact on the productivity of Roman Britain’s most important agricultural region.” He further noted that historical Roman accounts confirm that the resulting food shortages had profound destabilising effects on society.

By 367 CE, famine conditions had become widespread, with Roman historian Ammianus Marcellinus describing Britain’s population as enduring “utmost conditions of famine” in his work Res Gestae. The stress on resources also weakened the Roman military presence, particularly along Hadrian’s Wall, leading to desertions and leaving the province exposed.

This vulnerability encouraged a series of incursions by external groups. The northern Picts, western Scotti from Ireland, and southern Saxons from continental Europe launched coordinated attacks. The turmoil was severe—Roman commanders were captured or killed, and some Roman troops even defected to the invaders. Although Emperor Valentinian I managed to restore a degree of control by 369 CE, the province never fully recovered and Roman administration eventually withdrew completely around 410 CE.

Charles Norman, the study’s lead researcher and a doctoral candidate at Cambridge, commented on the significance of these findings: “Our findings provide an explanation for the catalyst of this major event.” He highlighted that while historical texts have long identified the “Barbarian Conspiracy,” the environmental factors underpinning it were not previously clear.

The study also draws parallels between ancient events and contemporary challenges. Tatiana Bebchuk of Cambridge stated, “The relationship between climate and conflict is becoming increasingly clear in our own time. Extreme climate conditions lead to hunger, which can lead to societal challenges, which eventually lead to outright conflict.”

Overall, the research illustrates how environmental stressors, such as drought, have historically played a critical role in destabilising societies, even one as powerful as the Roman Empire, altering the course of history in Britain during late antiquity.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

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* <https://archaeologymag.com/2025/04/drought-triggered-invasion-in-roman-britain/> - Supports the link between catastrophic drought and the 'Barbarian Conspiracy' rebellion in Roman Britain around 367 CE.
* <https://phys.org/news/2025-04-extreme-drought-contributed-barbarian-invasion.html> - Confirms the methodology of oak tree-ring reconstruction and identifies 364-366 CE droughts as key factors in agricultural collapse.
* <https://www.downtoearth.org.in/climate-change/why-did-the-romans-leave-britain-extreme-drought-may-have-been-the-trigger-say-cambridge-researchers> - Validates the study's conclusion that prolonged droughts contributed to Roman withdrawal from Britain by 410 CE.
* <https://pmc.ncbi.nlm.nih.gov/articles/PMC12003598/> - Provides detailed analysis of drought impacts on Hadrian's Wall defenses and grain supply failures mentioned by Ammianus Marcellinus.
* <https://phys.org/news/2025-04-extreme-drought-contributed-barbarian-invasion.html> - Duplicated URL for verification of reconstructed rainfall data (28-37mm vs. 51mm average) and societal destabilization described in the article.
* <https://news.google.com/rss/articles/CBMihgFBVV95cUxObXJ4RktjbmxvOVZia3FhTTBoRjdGY1h6M2JhbzdORkNPdmZ2MW81WmNWU1hTX3pfQVVwb2dVeUt4bUtNcG1UbDlnUmtJNUFieVZRZnRmWkY5c3pPRndIenVmVmlUSkFDd2tVNEFQZE1JSWlJZ2JmaGJLQmszQ2NYZ09uODlhdw?oc=5&hl=en-US&gl=US&ceid=US:en> - Please view link - unable to able to access data