The Younger Dryas cooling in NE-Germany

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BACKGROUND

After retreat of the ice-sheet from NE-Germany, vegetation could expand. This culminated in birch and later pine forests during the Lateglacial Interstadial (GI-1). Subsequently, the landscape became more open during the Younger Dryas Stadial (GS-1), although open pine forests persisted. At the transition to the Holocene, a more dense vegetation cover could develop again.

However, temperature changes associated with these changes have not yet been quantified for this region. In this research, mean July air temperatures will be reconstructed, based on the assemblages of fossil chironomids ('non biting midges'). **CORING SITE**

The study site is located in the Friedländer Groβe Wiese in Mecklenburg-Vorpommern. It is located in the western part of the proglacial lake Haffstausee, north of the Rosenthaler terminal moraine and was likely formed by thawing of dead-ice. The FGW deposits reach a thickness of over 12 m.





PRELIMINARY CONCLUSIONS AND FURTHER RESEARCH

It seems that the lake was formed during the Lateglacial Interstadial. Additional ¹⁴C dates and geochemical analysis of the tephra shards will provide a reliable chronological framework.

- ➤ Exceptionally thick Interstadial deposits were formed reworking/redeposition?
- \succ Climatic deterioration is visible in all proxies from a depth of ~5.80 m \rightarrow onset of the Younger Dryas.
- The transition from the Younger Dryas to the Holocene is clearly seen as an abrupt change in all proxies.

> The use of a chironomid transfer function will enable us to quantitatively reconstruct temperature changes associated with the onset and termination of the Younger Dryas.

> High-resolution analyses of the Interstadial section will enable us to identify centennial scale climatic oscillations.

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