



## **A radiocarbon wiggle-match dated age-model for the proglacial lake Hervavatnet, western Norway**

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Proglacial lake deposits represent important archives for the reconstruction of past changes in environment and glacier extension. Precise and reliable age models based on high-quality macrofossils are needed for the interpretation of such archives. A series of 38 AMS radiocarbon dates on terrestrial plant macrofossils, insects and chironomids of the proglacial lake Hervavatnet, western Norway, is constructed between 218 and 22 cm, covering the time span 9950 to 900 cal BP.

We discuss two major outcomes of the precisely dated stratigraphic record:

- (1) The AMS dates of chironomids give reliable ages.
- (2) The employment of radiocarbon wiggle-match dating in combination with accurate stratigraphic description is an exciting avenue for the reconstruction of small changes in lake sedimentation that can be used to infer environmental change during the Holocene.

Two changes within in the stratigraphic record are highly important. The most abrupt change in sedimentation is between c. 8200 and 7900 cal BP and is interpreted as a remarkable glacier advance. The considerable change from organic gyttja to silt containing only few macrofossils at c. 1100-900 cal BP demonstrates in an instructive way the Neoglacial expansion of the glacier in the catchment prior to the 'Little Ice Age'.