

Short description - Characterisation of deterioration of archaeological wood artefacts from perennial snow patches in Central Norway.

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Funding received from Bothéns stiftelse was used to purchase a Konica Minolta Vivid 9i 3D scanner to be used in the condition assessment of archaeological artefacts as part of a PhD research project at the Department of Conservation, University of Gothenburg.

Characterisation of wood from archaeological artefacts recovered from melting perennial snow patches in high mountain areas of Central Norway is the primary objective of the PhD research project.

This research contributes directly to an inter-disciplinary project; the Snow Patch Archaeological Research Cooperation (SPARC). The key objective of SPARC is to investigate the effects of climate change on vulnerable high mountain heritage environments and to use this knowledge to develop sustainable use and management strategies. Researchers in archaeology, glaciology and conservation will contribute to the project.

The archaeological artefacts are related to historic and archaeological hunting activities from the Neolithic to the 17th century. The artefacts provide information on technological development and past hunting practices through the preservation of organic materials that do not survive under normal terrestrial burial conditions but are well preserved in the low temperature conditions of the alpine environment.

The research undertaken as part of this PhD will investigate the rate and nature of deterioration of wood from the selected archaeological artefacts. Modern samples of wood have been buried on site at a snow patch where a large number of artefacts have been recovered. Samples are retrieved annually over three years in order to examine the initial stages of deterioration that can then be used for comparison with the archaeological material. This will help to determine the expected rate of artefact deterioration upon exposure.

Morphological examination of the archaeological samples will be carried out using the 3D scanner to determine the extent of deterioration related to environmental conditions such as ground movement, mechanical stress and wind erosion.

Monitoring of the condition of artefacts with the 3D scanner soon after recovery will allow an assessment of shrinkage or deformation as the wood is dried. This will provide valuable information for both conservation treatments and archaeological assessments of artefacts.