

Abstract for 7th Developing International Geoarchaeology Conference

Title: *Tracing the properties and use of flint tools*

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Abstract:

Flint and other siliceous lithics were the most important raw materials for stone tools for the vast majority of human history. Due to their good preservation, artefacts made of these materials are often the only surviving source of information we have about human history throughout the greater time of Stone Age. Therefore, lithic analysis is a popular research topic in geoarchaeological studies. More precisely, characterisation of these raw materials is a highlighted topic and has a rather long research history.

Microwear analysis is a method that investigates the use of tools, more precisely the microscopic surface alterations that reflect the contact material that has been worked with the tool and the techniques of use. Therefore, this approach is crucial in our understanding of past daily life and technologies.

The characteristics of the raw material highly affects the development of microwear traces. Moreover, post-depositional processes, such as patination and burning, have an influence on the preservation of these traces. Our research project aims to explore these connections. Different techniques are used to investigate flint characteristics, weathering processes and the relation between both, as well as the development of microwear traces and their preservation. Replicas of prehistoric stone artefacts will be analysed on microwear traces, both before and after experimental weathering (patination, burning, etc.). The possible use of different archaeometrical techniques will be tested in both phases. The outcome will be the development of a protocol for the registration of microwear traces and weathering processes using new, and non-destructive methods, such as high resolution X-ray computed tomography, SEM-EDX, XRF and others. The protocol will be further tested on prehistoric artefacts from sites that belong to the transitional period of Final Mesolithic-Early Neolithic of the Scheldt valley in NW Belgium.