

Siliceous raw materials between Rhine and Scheldt: constitution of a rock library using international standards

SCIENTIFIC EVENTS FOR YOUNG RESEARCHERS OF THE FRANCO-
GERMAN UNIVERSITY

ORGANISATION COMMITTEE

Project holders:

Silviane SCHARL (Cologne University, Institute of Prehistoric Archaeology);

Solène DENIS (UMR 8068 TEMPS and Department of Archaeology and Museology, Masaryk University);

Jean-Philippe COLLIN (U.Namur and UMR 8215 Trajectoires)

With the collaboration of:

Vincent DELVIGNE (CNRS, UMR 8068 TEMPS)

Birgit GEHLEN (Cologne University, Institute of Prehistoric Archaeology)

Ingrid KOCH (Cologne University, Institute of Prehistoric Archaeology)

Institute of Prehistoric Archaeology, Cologne University, Germany

CNRS, UMR 8068 TEMPS, France

PaTHs/AcanthuM, Namur University, Belgium

**Training course on the petrology of silicites, Cologne University, 7-
12 February 2022**

SCIENTIFIC OBJECTIVES

The training course organised in Cologne from 7th to 12th February 2022 will focus on introducing and updating knowledge on the characterisation of silicites (flint, chert, silcrete, jasperoids) used to make tools by prehistoric communities. Integrated into action III of the GDR "Silex" (directed by C. Bressy-Leandri, French ministry of culture and communication), its objective is to promote the conceptual advances and the most recently developed characterisation methods, to explain them, and to encourage their dissemination with a view to harmonising, networking and pooling siliceous geomaterial references on a European scale. Recent methodological advances, taking into account the concept of the 'evolutionary chain'

make it possible to overcome many dead ends in terms of characterising the origins of rocks. This will be applied to the Upper Cretaceous flints of the Benelux (silicites from the Mons Basin, the Hesbaye and Limburg), in order to reinforce the skills of petroarchaeologists and archaeologists and enabling them to develop more reliable models. These models, which concern individual or collective behaviour, territoriality and mobility systems, or transfers and exchanges during prehistory, are at the heart of the research of many laboratories.

TEACHING AND SCIENTIFIC TEAM

Vincent DELVIGNE (CNRS UMR 8068 TEMPS)

Paul FERNANDES (UMR 5199 PACEA and Sarl Paléotime)

Patrick GRUNERT (Cologne University, Geology Department)

Jean-Philippe COLLIN (U.Namur and UMR 8215 Trajectoires)

Christophe TUFFÉRY (DST INRAP)

PROGRAM

7th February: Arrival of participants and classroom training

9:30 am: arrival of participants and introduction to the course

10:00-12:00 am: Theoretical approach: the concept of the evolutionary chain (definition, presentation, implications) (P. Fernandes and V. Delvigne)

1 pm-3 pm: State of research and presentation of problems specific to the Benelux silicites: History, litho-stratigraphy & concordance of geological deposits, availability of raw materials, archaeological questions (Neolithic, Mesolithic and Palaeolithic), contribution of the evolutionary chain (J.Ph. Collin and V. Delvigne)

3 pm – 5 pm: Prospecting method, development of reference collections (lithotheques), presentation of available tools (E. Vaissié and C. Tufféry)

5 pm – 6 pm: debate

8th February: Field trip

9 am - 5 pm: Practical application in the field of the tools presented the day before (123 Survey for Arcgis, sampling protocol, presentation of stratotypes, etc.). The selected areas are the Hesbaye (Orp-Jauche and Oupeye region) and the Middle Meuse basin between Braives and Maastricht. Samples will be collected and analysed during the practical work sessions on days 4 and 5 (below).

9th February: Classroom course: analytical method in petrology of silicites

9 am-12 am: Explanation of grid 1: "Petrography" (V. Delvigne, P. Fernandes)

Grid 1 contains 82 entries describing the main criteria for defining microfacies, the formation environment and the age of the silicite that allow the genetic type to be characterised.

1 pm – 4 pm: Explanation of grid 2: "Gitology" (V. Delvigne, P. Fernandes)

The grid 2, consisting of 44 entries, aims to identify the different facies of each genetic (sub)type defined in grid 1.

4pm – 5pm: Explanation of grid 3: "Taphonomy" (V. Delvigne, P. Fernandes)

Grid 3 consists of 38 entries and aims to describe the type and intensity of post-depositional processes. These elements give us information about the edaphic processes that have occurred since the object was abandoned by man and inform us about the integrity of the archaeological levels.

10th February: Practical exercises

9 am – 11 am: Introduction to the identification of foraminifera (P. Grunert)

11am - 5pm: Observation in pairs of geological samples collected during the field trip according to the characterisation grids presented on day 3 (supervised by V. Delvigne, P. Fernandes)

11th February: Practical exercises

9 am – 12 am: Observation in pairs of geological samples collected during the field trip according to the characterisation grids presented on day 3 (supervised by V. Delvigne, P. Fernandes)

1pm-4pm: Observation in pairs of selected archaeological objects

4pm-6pm: debriefing of the training and future projects

LANGUAGE

The manifestations will be held in English. Help can be provided in French and German.