

International Meeting

Beneath the Surface

Ancient Human Agency in the Subterranean World

<https://chauvet.sciencesconf.org/>

2-4 July 2025, Vallon-Pont-d'Arc (France)

This international scientific meeting is being organized as part of the 30th anniversary of the discovery of Chauvet cave (1994-2024). It will take place from July 2 to July 4, 2025, at the conference center of the facsimile of Chauvet cave, in Vallon-Pont-d'Arc (Ardèche, France).

The meeting aims to promote interdisciplinary and integrated studies of prehistoric caves, encompassing a comprehensive definition of such environments.

In the past few decades, significant theoretical and methodological advancements have emerged, driven by new discoveries and lively debate. We anticipate that this meeting will provide an opportunity to assess progress, stimulate reflection, explore new paradigms, and open up new avenues of research.

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1 Background

Paleolithic hunter-gatherer communities not only transformed the subterranean environment (through activities such as creating cave art, establishing settlements, or using fire, etc.), but they were also shaped by it. They adapted their movements, their sensory perceptions (sight, hearing) and their spatial awareness to navigate this unique environments, characterized by the interactions it imposes – both among humans and with animals, including large predators such as wolves and cave bears. Consequently, caves provide complex archaeological and paleontological records, where diverse agents interact and multiple temporal layers converge.

The discovery of Chauvet cave in 1994 (Ardèche, France) radically changed our understanding of Paleolithic art and reshaped our approach to decorated caves. **The 30th anniversary of this discovery is therefore an opportunity to bring the scientific community together, fostering dialogue to exchange points of view and approaches in studying the prehistoric occupation of the subterranean world.**

2 Call for Abstracts

Scientific contributions will be presented as contributed lectures and poster presentations. The call for abstracts will be launched on 1 December 2024. The deadline for abstract submissions will be 31 January 2025. Participants will be notified by 1 March 2025 if their abstracts are accepted for a presentation or poster.

For the submission of your abstract, please refer to the guidelines on the conference website: <https://chauvet.sciencesconf.org/>.

3 Conference Registration

Conference registration will open in early February 2025. The deadline for early registration is 30 April 2025. Please expect a conference registration fee of about 150 EUR, with discounts for students.

The conference fee includes admission to the full conference, coffee breaks, lunch and dinner (all served at the conference venue).

4 Conference Topics

4.1 Anthropization of the Subterranean Environment

For prehistoric societies, the subterranean world was an extension of their surface territories, as early as the first phases of prehistory. In addition to the occupation of the entrance of caves, and in parallel with the graphic expressions that are the subject of

particular attention in prehistory, the archaeological record is rich with evidence of occupation and activity in deeper underground environment by human groups, whether as a collective or individual behavior. These remains (e.g. dry-stone structures, broken concretions, hearths, mouchages, ichnites, extraction of raw materials, manuports, burials, etc.), reflect different perceptions and appropriations of this very special environment.

Recent discoveries, multidisciplinary and multi-proxy approaches, combined with the development of new methodologies, have advanced our knowledge and raised new questions about the relationship between humans and the subterranean world. This session will look at the diversity of prehistoric human behaviors, from those that can be studied through the recognition of faint traces to those that have led to transformative changes of the underground landscape.

Keywords: (deep) karst; paleospeleology; pyrotechnology; speleofacts.

4.2 Technical Knowledge and Worldview through Rock Art

Chauvet cave is a pivotal reference for interpreting Paleolithic art, revolutionizing our paradigms and our descriptive approach to graphic expressions of this period in human history. It is now crucial to deepen our understanding of the technical skills (engraving, pigment use, material characterization, etc.) and cognitive abilities (mental schemas, psychology of form, etc.) involved in the act of drawing. This knowledge is essential for guiding analytical results toward meaningful interpretation.

Investigating the *how?* and the *why?* will enable the exploration of human agency through symbolic gestures in subterranean environments, as well as the interactive relationships between humans and non-humans. Within this unusual setting, it is necessary to identify the way in which these human groups organized their thinking within a network of relationships including all animate creatures (human and non-human). This comprehensive and comparative approach aims to evaluate and propose dynamic networks that shaped the worldview of indigenous societies.

Keywords: engraved drawing; painting; pigment; graphic composition; interpretation; 3D imaging; archaeometry.

4.3 Paleoecology and Anthropozoology

The subterranean environment of Chauvet Cave contains a wide range of features relating to human and animal activity, both past and present. The remnants of their activities on the ground or on the walls, as well as the composition of the faunal spectra and taphonomic processes, reflect alternating visits by different communities or interactions, whether trophic or symbolic.

The aim of this session is to provide an opportunity for multidisciplinary exchange and discussion, covering prehistory and more recent periods, anthropology and the ecology of modern large mammals, in relation to the underground environment and its implications for understanding Paleolithic worlds. Based on original observations

in the field, studies of museum collections, and methodological developments, contributions are expected that provide a cross-cutting view of the use of the subterranean environment.

Keywords: archaeozoology; human-animal interactions; paleontology; taphonomy; traceology.

4.4 Caves as Memories of Past and Recent Changes

Reconstructing archaeological sites as they appeared when visited in the past, in order to gain a better understanding of their landscape dimensions, their specific physical features, potential obstacles to progress, etc. is an increasingly important focus in current research on underground environments. This work of reconstructing past landscapes relies on the study of underground morphologies and deposits on the walls and on the ground, and reflects the evolution of the cave over time. This evolution is largely controlled by external and environmental parameters (hydraulic gradient, climate, vegetation cover, etc.). In this context, caves are genuine archives of the evolution of past and recent environments, and play a crucial role in preserving and recording them over time.

The study of these subterranean memories in conjunction with animal and human traces enables us to reconstruct the different stages in the evolution of the subterranean landscape before, during, and after the periods of frequentation, while linking them to the specific features of the relief and the external environment. The integrated interpretation of the cave now enables us to look closely at the specific features of the outdoor and underground landscapes over time, and to examine the state of the cave walls and floors at the time they were visited.

Presenting the results obtained from underground archives, methodological developments and current challenges will be central to this session. Particular attention will be paid to the conditions of access to caves, to the reconstruction of underground landscapes at the time they were visited, and to the definition of landscape changes since prehistoric times.

Keywords: geomorphology; paleoclimatology; paleoenvironment; hydrology.

4.5 Chronology and Bio-Events in Underground Environments

This session will explore the complex chronologies characterizing Paleolithic caves. Sedimentary fillings, like painted walls, constitute palimpsests, shaped over time by taphonomic processes. How, then, can we approach the temporality of ancient human activities and animal visits to caves? How can we reconstruct chronologies with precision and resolution that can effectively distinguish between competing archaeological or paleontological hypotheses?

Presentations will feature case studies, (macro-)regional studies, methodological issues or critical reviews. This session aims to foster interdisciplinary discussions on dating technics (^{14}C , U-Th, OSL, cosmogenics...), methodological advancements,

statistical analysis, and data interpretations to provide insights into cave chronologies and ecosystem dynamics.

Keywords: absolute and relative dating; chronological modelling; geochronology; palimpsest.

The Conference is organized by the scientific research team of Chauvet cave.



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