



## **Roman Aqueduct Carbonates: Palaeoenvironmental Reconstructions and Water Management**

**Workshop, 16–17 February 2023  
Maison Française d'Oxford**

convened by Gül Sürmelihiindi, Julien Curie, Andrew Wilson and Olivier Delouis

*Ancient aqueducts and related structures can in a sense be brought back to life through study of the carbonate incrustations that formed during their periods of use. These laminated deposits precipitated over decades or centuries, and reflect periodic changes in temperature, discharge, and water composition. From them we can reconstruct usage chronologies, and breaks in the sequence of deposition may record events such as channel cleaning, or earthquake damage. Aqueduct carbonates are thus archives from which we can learn about past environmental conditions and water-management activities including responses to drought and earthquake. Carbonate deposits are therefore of interest to a wider community to understand resilience and persistence in ancient societies.*

*The goal of this workshop is to bring together different studies, disciplines, ideas, and perspectives to assess the state of the field in research on carbonates in ancient hydraulic structures; to explore the limits of the possible in this area, and develop a research agenda for the future. It aims also to increase wider awareness of aqueduct carbonate studies and their applicability to historical questions of ancient water management and human response to environmental change.*

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**February 16<sup>th</sup> 2023**

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09:45 Welcome & Introduction

**Olivier Delouis**, CNRS – Maison française d'Oxford, Campion Hall

**Andrew Wilson**, Institute of Archaeology / All Souls College, Oxford

10:00 Keynote 1

**Jim Crow**, University of Edinburgh

*Carbonates and other proxies: refining the narrative of the water supply of Constantinople*

<11:00 coffee and tea >

11:30 Paper 1

**Sophie Bouffier**, Aix Marseille Université – Centre Camille Jullian

*From HYDROSYRA to WaterTraces. Why combine archaeology and environmental sciences?*

12:15 Paper 2

**Klaus Grewe**, Rheinisch-Westfälische Technische Hochschule Aachen

*Sinter deposits in the Eifel aqueduct, Cologne*

<13:00 lunch at MFO (speakers)>

14:00 Paper 3

**Edwige Pons-Branchu**, Université de Versailles Saint-Quentin (UVSQ) –  
Laboratoire des sciences du climat et de l'environnement  
(UMR CEA/CNRS/UVSQ)

*Urban water quality through time in Paris, France: what can be learned  
from CaCO<sub>3</sub> deposits found in historical aqueducts*

14:45 Paper 4

**Christelle Claude**, Aix-Marseille Université – Centre Européen de Recherche et  
d'Enseignement des Géosciences de l'Environnement

*High resolution paleoenvironmental record from carbonate deposits in the  
roman aqueduct of Traconnade, Aix-en-Provence, France*

<15:30 coffee and tea >

16:00 Paper 5

**Tiziano Latini**, Sapienza Università di Roma – Ministry of Culture, Italy

*Geological evidence of exhausted hydrothermal venting in Veii Campetti  
Southwest archaeological site (Rome, Italy)*

16:45 Paper 6

**Julien Curie**, CNRS – ArScan (Nanterre) & ArTeHis (Dijon)

*A geoarchaeological approach to carbonate deposits from Roman  
sanctuary and thermal baths in Jebel Oust (Tunisia)*

17:30 Discussion

<18:00 wine & cheese at MFO (speakers and public)>

<19:30 dinner at All Souls (speakers)>

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10:00 Keynote 2

**Cees Passchier**, Johannes Gutenberg University Mainz, Germany

**Gül Sürmelihindi**, Marie Skłodowska-Curie AQUEA – School of Archaeology,  
Oxford

*Through a glass, darkly: the use of aqueduct carbonate to understand the  
Roman world*

<11:00 coffee and tea >

11:30 Paper 7

**Gül Sürmelihindi**, Marie Skłodowska-Curie AQUEA – School of Archaeology,  
Oxford

*Reconstructing chronologies of usage, maintenance, and abandonment in  
Roman aqueducts from carbonate deposits: the aqueduct of Divona  
(Cahors)*

12:15 Paper 8

**Duncan Keenan-Jones**, University of Manchester – School of Arts, Languages and Cultures

**Edwige Pons-Branchu**, Université de Versailles Saint-Quentin (UVSQ) –  
Laboratoire des sciences du climat et de l'environnement  
(UMR CEA/CNRS/UVSQ)

*Organic Compounds in Anio Novus carbonates (Rome)*

<13:00 lunch at Kellogg College (speakers)>

14:30 Paper 9

**Duncan Keenan-Jones**, University of Manchester – School of Arts, Languages and Cultures

*Trace element analyses and Pompeii's water supply*

15:15 Paper 10

**Julie Carlut**, CNRS – Institut de Physique du Globe de Paris

*The Pompeii water supply system and the Aqua Augusta: a (rather) complex story*

<16:00 coffee and tea break>

16:30 Paper 11

**Philippe Leveau**, Aix-Marseille Université – Centre Camille Jullian (*in absentia*)

*Apport des dépôts carbonatés au fonctionnement des aqueducs romains d'Arles*

17:15 Summing up and closing discussion

**Andrew Wilson**, Institute of Archaeology / All Souls College, Oxford

