## Introduction

Alice Vinet<sup>1</sup> – Denis Guilbeau<sup>2</sup> – Bogdana Milić<sup>3</sup>

The idea of this book originates from the 24<sup>th</sup> Annual Meeting of the European Association of Archaeologists (EAA), held in Barcelona from the 5<sup>th</sup> to the 8<sup>th</sup> of September 2018. The book initially took shape within a session titled "Strategies of Obsidian Procurement, Knapping and Use in the First Farming Societies from the Caucasus to the Mediterranean". However, it evolved beyond this starting point to encompass additional contributions from scholars who were not present at the meeting. The aim of the volume is to present new studies involving innovative approaches in obsidian studies in order to revive the debate on the procurement strategies, knapping and use of this raw material, which in some sites remains the predominant source of exotica. Indeed, since they began in the 1960s, obsidian provenance studies have been advanced through new methods of analysis and characterization that have created a rich database in relation to the obsidian sources in the focus area of this volume. Meanwhile, chipped stone analyses have benefited from the development of technological and functional studies. However, it is only from the end of the 1980s that significant use-wear studies focusing on obsidian have been published.

The geo-chronological framework of this book is intentionally broad, covering a span from the 8<sup>th</sup> to the 1<sup>st</sup> millennium BC and a large area from the central Mediterranean to the Caucasus. The use of obsidian was influenced by the environment and cultural background of the prehistoric communities. The aim of this volume is to compare, on a large scale, the strategies employed by the farmers to exploit obsidian in different socio-cultural and environmental settings and to identify the main parameters that conditioned the exploitation of this raw material.

In Italy, during the 4<sup>th</sup> and 3<sup>rd</sup> millennia BC, obsidian procurement and use appear more related to social relations than to practical needs. Kyle Freund, in the paper entitled "Stone in the Age of Metals: Shifting Value Regimes at the Neolithic-Chalcolithic Transition (Central Mediterranean)", shows that the decrease in the exploitation of obsidian occurs simultaneously with the development of metalworking, at a time when maritime mobility and long-distance exchange increased sharply. Hence, the importance of obsidian as a raw material for the manufacture of tools seems to be secondary.

This is a common feature observed on different scales in space and time. In their paper "The Exploitation and Diffusion of Obsidian from the Western Mediterranean and the Aegean (7<sup>th</sup>-4<sup>th</sup> Millennia BC): An Exploratory Comparison", Catherine Perlès and Denis Guilbeau examined various factors related to the obsidian outcrops and the geographical settings in Italy and the Aegean. They also considered the social and cultural context over time, from the beginning to the end of the most intensive period of obsidian use in prehistory. The major differences observed between the two regions are not strictly related to geographical and geological factors (i.e. the

<sup>&</sup>lt;sup>1</sup> University Paris 1 Panthéon Sorbonne, UMR 8215 Trajectoires, Paris; UMR 7264 CEPAM, Nice, France; alicevinet @orange.fr.

<sup>&</sup>lt;sup>2</sup> Ministère de la Culture, DRAC Occitanie, UMR 5140 Archéologie des Sociétés Méditerranéennes, Montpellier, France; denis.guilbeau@culture.gouv.fr.

<sup>&</sup>lt;sup>3</sup> Austrian Archaeological Institute, Austrian Academy of Sciences, Vienna, Austria; Archaeology and History of Art Department, Graduate School of Social Sciences and Humanities, Koç University, Istanbul, Türkiye; bogdana. milic@oeaw.ac.at.

quality of obsidian outcrops, raw material distribution in the region, etc.); some differences are clearly related to the contrasting trajectories followed by these regions between the very end of the Mesolithic and the dawn of the Bronze Age.

In the paper entitled "Finding Their Sea Legs? Obsidian's Contribution Towards Understanding the Growth of the Aegean Neolithic", Marina Milić shows that the origins of the networks for the exploitation of obsidian during the Neolithic in the eastern Aegean probably emerged in the last phases of the Mesolithic. The arrival of new populations during this period seems to be a key factor for the development of these connections. Provenance analysis based on technological studies shows the complexity and diversity of the distribution networks.

These observations are confirmed in the paper by Denis Guilbeau entitled "Distribution Mechanisms of Obsidian in the Aegean from the Initial Neolithic to the Chalcolithic (6800–4500 cal-BC): A View from Uğurlu (Gökçeada/Imbros Island)", focusing on a unique site in the north of the Aegean. The characterization of the chaînes opératoires throughout the sequence, from the beginning of the 7<sup>th</sup> until the 5<sup>th</sup> millennium, highlight the diversity in the provenance of this rare raw material, and the variety in its exploitation and distribution, outlining its role in mediating exchanges with other communities

In addition, this volume also gives insights from the studies conducted on a micro scale. The paper by Cristina Lemorini and Davide D'Errico entitled "Household Toolkit in the Neolithic Megasite of Çatalhöyük (Central Anatolia): The Obsidian Assemblage of Building 65 (South Area)" demonstrates that even on the scale of a single house, the management and use of obsidian at Çatalhöyük in around 6400–6000 BC was very varied. The use-wear analysis showed that the activities carried out with the chipped stone tools inside and outside this building were especially related to the manipulation of plants and that most tools were abandoned when totally exhausted. This behaviour could be explained by provenance issues or functional properties.

Another contribution regarding the same archaeological site by Heeli Schechter, focusing this time on the Late Neolithic in the paper "Intentional Obsidian Depositional Practices at the Late Neolithic TPC Area of Çatalhöyük", draws attention to the deposition of obsidian artefacts in caches and their relation to social, cultural and symbolic aspects, some of which were likely connected to private rituals. With an in-depth technological study, she shows that these artefacts are different from those found in middens or in the infill of the structures. She also observes that the caches were slightly different from those from the earlier phase of the occupation of Çatalhöyük.

The next paper compares the use of obsidian in the following period, at the beginning of the Chalcolithic, at Çatalhöyük and Tepecik-Çiftlik, a site located in Cappadocia, and points to very distinct strategies. In a paper entitled "Rethinking the Function of the Early Chalcolithic Points from Çatalhöyük-West and Tepecik-Çiftlik (Türkiye)", Alice Vinet shows that at Çatalhöyük the frequency of points decreased during that period, in accordance with the very limited role of hunting as a mode of subsistence. At Tepecik, by contrast, points remain abundant throughout the sequence, and many show characteristic impact fractures, which is consistent with the increasing importance of hunting, which seems, instead, to have been a social activity.

The obsidian used by the prehistoric communities in central Anatolia mainly comes from three outcrops located in Cappadocia. The procurement strategies in the Caucasus and eastern Anatolia are highly contrasting. The accurate characterization of all obsidian outcrops is still in process. In this respect, the paper "Trace Element Geochemistry of Armenian Obsidian Sources and the Provenance of Archaeological Obsidian Artefacts" by Khachatur Meliksetian, Ernst Pernicka, Ruben Badalyan, Thorsten Schifer, Jörg Keller, Boris Gasparyan, Ruben Jrbashyan, Gevorg Navasardyan, and René Kunze is of considerable importance. The research team analysed hundreds of samples in order to improve understanding of the chemical composition of obsidian in each outcrop. In addition, the study yielded substantial data to facilitate understanding of the distribution of obsidian in the region between the Neolithic and the Bronze Age.

During the Neolithic in the Caucasus area, obsidian was widely distributed and used. Some sites, such as Aruchlo in eastern Georgia, were closely related to a single outcrop. It appears that most of the obsidian found at Aruchlo came from Chikiani, located several dozen kilometres away

from the site. The technological and typological study, combined with the results of provenance studies undertaken by Petranka Nedelcheva, Ernst Pernicka, and Ivan Gatsov, entitled "Obsidian Tool Production and Exchange in the Southern Caucasus during Late Prehistory", offers new insight into the management of this raw material. Various chaînes opératoires, associated with different knapping techniques, were outlined, together with a rich toolkit.

The large geographical and chronological framework of this book, associated with a great variety of research questions, offers an up-to-date overview of how obsidian was exploited, distributed and used in the Caucasus and the Mediterranean region. Moreover, the topic is investigated on various scales: from a large region to the level of a single house. This volume therefore offers new contributions which target the issues of obsidian provenance through the use of XRF and neutron activation analyses (NAA) and production and use through techno-typological and functional use-wear analyses. Finally, subsistence strategies, socio-economic contexts and symbolism are largely discussed by considering obsidian as a key element in chipped stone assemblages across a wide area, which once again proves to play a significant role in understanding the onset of farming societies and their local and regional developments and transformations over time.