

MATEUSZ CWALIŃSKI, *Amber in the Circum-Adriatic Bronze Age: Acquisition, Circulation and Adaptation*. Peter Lang, Lausanne – Berlin – Brussels – Chennai – New York – Oxford 2023. 732 pages, 148 figures, 50 tables, 43 colour images, online catalogue, hardback, ISBN 978-3-631-88857-5.

Mateusz Cwaliński's monumental work on amber in the Adriatic area and neighbouring regions represents the revised version of his doctoral dissertation, carried out at the Adam Mickiewicz University of Poznań between 2012–2021. Simply by looking at its broad spatial and temporal scope – from Italy to the western and central Balkans, over more than a thousand years – the work comes across as extremely ambitious. For someone like me, who works in both areas and is familiar with the challenges in dealing with the diverse regional literatures – rooted in different traditions and applying different chronological, typological and terminological systems – the endeavour might seem even more courageous. Nevertheless, the author managed to dissect the subject with surgical precision, each time finding a strategy to tackle the many obstacles that arose. By doing so, he provided us with a comprehensive picture of amber circulation in the Adriatic area and its role within the European Bronze Age exchange/trade networks. After a short summary of the contents, a critical review follows.

The book is organised into five chapters divided into paragraphs and subparagraphs. Chapter 1 clearly introduces the topic, geographical and chronological scope, research questions and methods. Expanding the focus beyond the Adriatic coast to include more distant areas (such as Vojvodina, Serbia, Kosovo and North Macedonia), possibly connected via river routes in the amber exchange in which the 'waters of the Adriatic play the role of a potential communication artery',¹ seems like a well-grounded choice. It reflects an approach that prioritises networks and connections over fixed geographical or cultural boundaries.

To answer research questions related to the circulation, provenance and symbolic meaning of amber in the circum-Adriatic area – and to assess the region's role within a wider pan-European context – the study adopts a broad range of methodologies. These include refining the chronology of the finds, developing a new typology that goes beyond regional classifications and using network analysis for reconstructing interaction networks. The symbolic value of amber is examined through a close reading of the archaeological contexts in which it occurs, while its circulation is

subsequently considered within a broader European framework. As this is an introductory chapter, the author also outlines key concepts such as 'exchange' and 'trade', tracing how they have been approached in archaeological and anthropological literature, from Marcel Mauss and Bronisław Malinowski onward.²

Amber is also defined here from a chemical perspective, highlighting differences between succinite (i.e. Baltic amber), simetite (Sicilian amber), rumanite (Romanian amber) and other fossil resins. Although amber is naturally available only in limited geographic areas, its widespread presence – even far from its place of origin – has made it a key proxy for investigating long-distance trade and exchange.

The idea of 'amber routes' along Europe's major rivers was first introduced by José Maria de Navarro in 1925 and has since been revisited regularly by scholars such as Janusz Czebreszuk, Anthony Harding, Nuccia Negroni Catacchio and Aleksandar Palavestra. While the importance of the Adriatic region in amber circulation has long been acknowledged for the Iron Age, it was largely overlooked for the Bronze Age, at least until the last quarter of the 20th century. At that point, Bronze Age amber in the Adriatic began to receive renewed scholarly attention, thanks to studies by Nuccia Negroni Catacchio, Ivana Angelini, Paolo Bellintani, Massimo Cultraro, Joan M. Todd and Aleksandar Palavestra, among others.³

The final part of the chapter includes two sections on the history of research: one focused on Italy, the other on the western and central Balkans, both organised in multiple time slices.

In Chapter 2, 'Contextualising amber: distribution, chronology, cultural attribution and provenience', the author first introduces the various periodisations used across the Italian, Balkan, central European and Aegean regions.⁴ He outlines their evolution over time in terms of phase subdivisions, associations with archaeological cultures and correlation with absolute chronology, sometimes highlighting the varying scholarly interpretations of these frameworks.

¹ p. 16.

² pp. 19–29.

³ pp. 42–48.

⁴ Par. 2.1.

This is followed by a critical review of the contexts in which amber occurs,⁵ including discussions of each site's stratigraphy, chronology and associated finds. The section is organised according to 'provinces of amber's acquisition', defined based on 'visible concentrations of amber finds'.⁶ These provinces may correspond to modern regions or geographical features. As with the definition of the study area, the boundaries are determined by archaeological evidence rather than by pre-existing fixed categories.

Since the dawn of the archaeological discipline, one of the main questions surrounding prehistoric amber has been its provenience,⁷ – a question that could only be addressed with reliable methods starting in the 1960s, thanks to the work of Curt W. Beck, who initiated the systematic compilation of infrared (IR) spectra of fossil resins. Fourier-transform infrared spectroscopy (FTIR) and attenuated total reflectance spectroscopy (ATR) have also been applied, along with various gas chromatographic methods. Cwaliński's work significantly increased the number of analysed objects, both from Italy and from the Balkans. Although succinite is the most commonly attested variety in both areas, 'undefined fossil resins' have been detected at Italian sites such as Coppa Nevigata and Trinitapoli, suggesting the import of amber from different sources.⁸

The chapter concludes with a diachronic overview of the commonness of amber across the different study regions,⁹ based on the number of contexts in which amber is found and the quantity of attested artefacts. Here, for the first time, the author defines the time slices used to synchronise all regions under study, arguing that 'the traditional four-partite division of the Italian Bronze Age [...] can be transposed into the Balkans as well'.¹⁰ The four periods are: Early Bronze Age (EBA) c. 2150 ± 50 – 1650 ± 50 BC, Middle Bronze Age (MBA) 1650 ± 50 – 1300 ± 50 BC, Late Bronze Age (LBA)¹¹ 1300 ± 50 – 1150 ± 50 BC, and Final Bronze Age (FBA) 1150 ± 50 – 950 ± 50 BC. Since it was not always possible to assign the finds to a specific phase, intermediate stages (e.g. EBA/MBA) have also been introduced to account for contexts or objects that 'have a long chronology spanning

all periods, or cannot be unambiguously dated to one or the other stage'.¹²

While the first two chapters serve as a prelude – offering an in-depth overview of the dataset and the theoretical foundations of the study – it becomes clear that with Chapter 3, 'From typology to networks: amber finds analysis', the author enters the core of his analytical work. After reviewing existing typologies for Bronze Age amber artefacts, specifically the work of Negroni Catacchio for Italy and of Palavestra for the Balkans, and highlighting the strengths and weaknesses of each system, Cwaliński presents his own typology, which includes 1,181 artefacts and unifies amber finds from both Italy and the Balkans within a single classification system. The classification criteria are clearly described¹³ and are accompanied by a visual representation of the applied parameters.¹⁴ Nine groups of objects are identified based on the location of the perforation, which provides insights into how the items were worn. Each group is further divided into subgroups and types, according to combinations of specific characteristics selected as classification criteria, with type labels reflecting these combinations.

The most numerous subgroups of types were analysed through seriation (both presence/absence seriation and frequency seriation) to investigate whether and how the morphology of amber objects changed over time, based on the chronology of their contexts. From the seriation, it becomes clear that some types (e.g. those belonging to subgroup IF) persist across multiple phases, whereas others (e.g. those from subgroups IA and IE) appear to be much more time-specific. Chronological observations are complemented by an analysis of spatial distribution, using a two-mode network visualisation in which both regions and types are represented as nodes. The links between them indicate which types are exclusive to certain regions and which are shared among two or more regions.

The creation of a new typology encompassing all circum-Adriatic regions served as the starting point for investigating interregional amber circulation from a diachronic perspective. This was done through a typology-based network analysis aimed at identifying connections across four periods: EBA, MBA, LBA and FBA. The networks are constructed based on shared amber types between regions (rather than individual sites), using the 'cross-product' method. Indices such as 'betweenness' and 'coreness' are

⁵ Pars. 2.2–2.3.

⁶ p. 82.

⁷ Par. 2.4.

⁸ p. 266.

⁹ Par. 2.5.

¹⁰ p. 282.

¹¹ Here, Late Bronze Age is used to indicate a phase that in the Italian chronology is called *Bronzo Recente*, which is more commonly referred to as the Recent Bronze Age. In fact, the term Late Bronze Age usually encompasses both the *Bronzo Recente* and *Bronzo Finale* phases.

¹² p. 317.

¹³ Par. 3.2.

¹⁴ Fig. 34.

calculated, the latter to identify two classes of nodes, namely cores and peripheries. The resulting networks are projected onto a map. However, in this case, the geographical layout functions purely as a visualisation tool and does not influence the analysis itself, unlike other approaches that may be described as hybrid, as they integrate both social (artefactual) and geographical data.¹⁵ In a second step, the degree of affiliation between regions connected by amber is tested against additional lines of evidence, such as the presence of other shared artefacts, mostly bronzes. Thanks to network analysis, and to the scrutiny of the other artefactual evidence, the author was able to highlight how relationships between the different regions change over time.

For the EBA, amber is attested in small quantities and in only a few regions, resulting in a simple network with Trentino-Alto Adige as the core, and the Lake Garda area and Sicily as peripheries. This picture changes significantly in the MBA, when we witness a veritable amber boom across the circum-Adriatic zone. The network now assumes a more defined structure, with five regions emerging as cores: western Veneto, Istria, northern Apulia and Basilicata, Po-drinje and western Serbia, and Emilia.

To reconstruct amber circulation in this phase, the connections identified through network analysis were verified to some extent by examining other shared artefacts, primarily weapons and ornaments. This crucial step, carried out in a systematic and thorough manner, allowed the author to distinguish between ‘probable connections’ and ‘suspected connections’.¹⁶ Northern Italy emerges as the main centre for amber acquisition and redistribution, directing flows to Liguria, Romagna, Istria and northern Apulia. The latter appears to play a mediating role toward more southern regions, while also maintaining connections with the Balkans.

This picture remains relatively stable in the LBA, with strong interregional links connecting Italy from the north to the south. In this period, the central Balkans network begins to disintegrate, with no contexts with amber securely dated to the LBA.

The FBA marks a rupture, with clear changes in network dynamics. This period is subdivided into two parts: FBA 1–2 (c. 1200/1150–1030/1010 BC) and FBA 3 (1030/1010–910 BC). In the first subphases, while western Veneto represents a key hub, we witness a shift in the main axis of circulation from the Adriatic to the Tyrrhenian side of Italy, with new focal points in Tuscany and Lazio; northern Apulia loses the mediating role it had played before.

Connections between northern Italy and the western Balkans are confirmed by the presence of shared bronze artefacts. In the following phase, the number of regions and sites involved in amber circulation diminishes noticeably.

In Chapter 4, ‘Material and symbolic status of amber in the Bronze Age societies of the circum-Adriatic zone’, the author shifts from the macro-scale perspective of interregional networks to a micro-scale analysis of the contexts in which amber was retrieved in order to explore how amber was conceived, perceived and utilised by Bronze Age societies in the circum-Adriatic area.

It is not surprising that amber is chiefly attested in graves, rather than in settlements or hoards. Although anthropological sex and age determinations are available for only a portion of these graves, the data clearly show that amber is most frequently associated with female and child burials, albeit with some exceptions.

Through a detailed analysis of grave goods found alongside amber, including the use of correspondence analysis, it becomes evident that amber is more commonly associated with ornaments than with weapons or tools. This suggests that ‘the circum-Adriatic communities of the Bronze Age saw amber as unfitting to the warrior identity, but compatible with other, non-militant social roles’.¹⁷

An examination of the percentage of amber-containing graves within cemeteries (limited to those with single interments) indicates that amber appears only in a small fraction of burials, implying that access to it was restricted to a limited segment of the community.

Some attention is also given to hoards. After reviewing existing theories, the author prefers to interpret hoards as the result of ritual practices. In this context, the author proposes that Krzysztof Pomian’s concept of ‘*sémiophores*’ may aptly describe the role of amber in Bronze Age circum-Adriatic societies: that is, objects ‘recognised in a given community as, first and foremost, conveyors of meaning’.¹⁸

Chapter 5, ‘Amber in the “macro”-perspective: circum-Adriatic zone and neighbouring regions’, explores the relationships between the circum-Adriatic area and northern Europe on one side, and the Aegean on the other, discussing the region’s role as an intermediary in amber circulation dynamics. The methodology applied does not differ significantly from that used in the rest of the study, and relationships are examined based on shared traits, beyond amber alone, and possible communication routes are proposed.

¹⁵ E.g. DUCKE, SUCHOWSKA 2022.

¹⁶ p. 405.

¹⁷ p. 498.

¹⁸ p. 546.

In the case of Aegean connections, amber seems to have played an important role in Mycenaean connections with the central Mediterranean, a topic addressed by many scholars and further substantiated by Cwaliński's work. Three main phases can be clearly identified: (1) a pre-palatial period, during which Sicily served as a key intermediary; (2) a palatial period, with a Tyrrhenian route later replaced by a southern Adriatic, and a possible central Balkan route; and (3) a post-palatial phase, in which the Aegean became dependent on northern Italy, where by this stage communities were no longer merely recipients of amber from elsewhere, but rather active producers of amber artefacts.

With numerous shifts in perspective throughout the whole work, back and forth from a single amber bead to the European Bronze Age world system and back, Cwaliński applies a veritable multi-scalar approach to reconstruct amber circulation in the circum-Adriatic area and its role in European trade networks in a way that already makes this publication a key point of reference not only for amber experts, but for all those engaged in the study of European Bronze Age trade and interactions.

The text is mostly clear and easily readable, with the author guiding the reader through the interpretation of graphs and statistical analyses. Technical terminology is used moderately, and there is a consistent effort to communicate in straightforward and comprehensible language.

There are, however, brief sections where the reading becomes more demanding. I am referring, for example, to the history of research,¹⁹ where the author's deep familiarity with the development of the discipline (and his strong interest in the figures who shaped it, particularly within Italian archaeology) is fully on display. While this section is undoubtedly important, the abundance of detail occasionally makes the text difficult to follow. In my opinion, greater conciseness could have made this part more accessible. I also wondered whether the detailed description of the sites used for the analysis²⁰ might have been more appropriately placed in an appendix, to be consulted when needed.

In any case, with the exception of a few moments when the reader is drawn into the author's tendency to overanalyse, the book offers a highly engaging and enjoyable reading experience. Although the text is clearly intended for specialists, I felt that certain sections could also be appreciated by enthusiasts of the subject or serve as stimulating reading material for archaeology students.

The graphic apparatus is extremely informative and provides crucial support. I would only express some doubts about the way the fluctuation in the commonness of amber across the different periods has been represented in the time series line charts.²¹

Including the intermediate phases (such as EBA/MBA, MBA/LBA, LBA/FBA and FBA/EIA) on the timeline gives the impression that they represent distinct chronological stages, rather than contexts or finds, which might be attributed to one of the two neighbouring phases, or to both. Unlike line charts, the treatment of intermediate phases in the network analysis seems more effective, as 'contexts classified to the intermediate stages [...] were used in both periods to which they pertain, thus occur twice in the analysis'.²²

The time slices proposed by the author for synchronising all regions of the study area are perfectly functional for the aims of the study, and I fully understand the choice to rely primarily on the Italian and central European chronological systems, also functional for dating the majority of the bronzes discussed in the study. Even though the terminology might be confusing for scholars working in areas like Albania and North Macedonia, where the chronological frameworks place the beginning of the Early Bronze Age much earlier (around 3000 BC) and the dating of the various periods sometimes differ significantly,²³ I think that using more neutral terms for the time slices (such as numbers or letters) would have further complicated the picture, rather than simplifying it.

Regarding the results of the typology-based network analysis, I find that there are some aspects, partly already addressed in the volume, that deserve further attention. As already mentioned, the MBA and LBA networks do not differ significantly from one another. However, as the author stresses,²⁴ one has to keep in mind that many sites are generically dated to the MBA/LBA and were therefore included in both networks. Looking at figures 21–33, we can see how highly represented the intermediate stage MBA/LBA is; it therefore has a greater potential to distort the results compared to other intermediate stages, which are characterised by fewer sites/artefacts and thus cannot have a significant impact on the results.

I think that in most cases, there was little room for alternative approaches; however, in certain instances, a more

²¹ Figs. 30–33.

²² p. 371.

²³ E.g., BULATOVIĆ, GORI, VANDER LINDEN 2020.

²⁴ p. 407.

¹⁹ pp. 46–80.

²⁰ Pars. 2.2–2.3.

decisive attitude might have contributed to the reconstruction of a clearer overall picture. I am referring, for example, to the dating of both hypogea of Trinitapoli, the richest amber assemblages from southern Italy, to *Bronzo Medio* 2B and *Bronzo Recente* 1, and to the treatment of their data within the MBA/LBA intermediate stage. Whereas LBA Subapennine elements are not identifiable in the Hypogeum of the Ivories, their presence among the ceramics from the Hypogeum of the Bronzes is undeniable. Nevertheless, these traits, belonging to an early phase of the Subapennine, and relating to the final burials, are isolated within a clearly older context. Cwaliński himself reminds us that ‘most scholars [agree] that the main period of the hypogeum’s use for funerary purposes falls into BM3’.²⁵ It is precisely in cases like this that making a more decisive choice would have benefited the macro-scale diachronic reconstruction, and certain phenomena and developments from one phase (MBA) to another (LBA) could perhaps have been highlighted more effectively.

Without analysing the extremely wide range of data and arguments used by the author to reconstruct amber circulation patterns in the Adriatic area and their connections with the European and Aegean networks in detail, I would like to conclude with a few reflections that were prompted by reading the text.

Cwaliński is particularly attentive to biases throughout the whole volume and emphasises more than once that ‘there are areas lacking evidence of amber which, nonetheless, could have participated in this process [of amber circulation]’.²⁶

The MBA network shows connections between northern Apulia and the central Balkans, but ‘this topic requires much more investigations before such interactions can be confirmed and their character defined’.²⁷ In this respect, it is worth underlining that Dalmatia, an amberless region during MBA, shows great similarities in the ceramic production with northern Apulia during this period;²⁸ it could therefore be assumed that it played a bridging role between the two regions connected by amber and isolated metal finds, namely northern Apulia and the central Balkans.

As resources, their origin and circulation patterns play a key role in the reconstruction of the European Bronze Age exchange/trade system,²⁹ it is worth highlighting that a large-scale chemical and isotopic characterisation of bronze

artefacts from the western and central Balkans revealed that, starting around 1400 BC and continuing throughout the entire Late Bronze Age, the Southeastern Alps became the primary source of copper for these regions.³⁰ In this respect, it is reasonable to assume that the circulation of copper played a role not only in the relationships between the southern Alpine area and northern Europe,³¹ but also had a crucial role in shaping the network centred around the Adriatic basin.

Finally, I believe that in the reconstruction of amber circulation between northern Europe and the Aegean, and its role within the European Bronze Age exchange/trade system, it could be stimulating to take into account recent studies on fragmentation, weight systems and balance scales,³² which provide clear evidence that a large part of Europe used bronze as a form of currency at least from the Late Bronze Age on (starting from c. 1350 BC).

Beyond these reflections, which could be the focus of future research, this work is impressive from many viewpoints. The hundreds of pages written by the author are characterised by extreme rigour, a systematic approach, critical thinking, and attention to detail, which ensures the highest reliability and solidity of the results. We find a combined and balanced application of different approaches and methods, including contextual analysis, typological classification, archaeometry, network analysis and extensive use of statistics, all of it embedded in a robust theoretical framework; this contributes to depicting an extremely dynamic picture through time and space, and also across different segments of Bronze Age communities.

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²⁵ p. 175.

²⁶ p. 375.

²⁷ p. 616.

²⁸ ARENA et al. 2020.

²⁹ pp. 571–573.

³⁰ MEHOFER et al. 2021. – GAVRANOVIĆ et al. 2022.

³¹ pp. 572, 617.

³² HERMANN et al. 2020. – IALONGO, LAGO 2021. – IALONGO, HERMANN, RAHMSTORF 2021.

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Alberta Arena
Austrian Archaeological Institute
Austrian Academy of Sciences
Dominikanerbastei 16
1010 Vienna
Austria
alberta.arena@oeaw.ac.at
 orcid.org/0009-0005-2653-7775