



**Review report on the PhD thesis**  
**Adam Mickiewicz University, Poznań**

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Title: "Circum-Adriatic branch of the amber route in the Bronze Age"

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**General description of the thesis**

The submitted thesis presents an in-depth, comprehensive reassessment of amber influx and its circulation in the Adriatic area and neighbouring regions - or circum-Adriatic regions, as the Author put it - (continental and peninsular Italy, Sicily and the Aeolian islands, the western and central Balkans) during the Bronze Age. It is based on a contextual approach, with the thorough analysis of contexts yielding amber finds considering various aspects (chronology, cultural attribution, type of deposition, association with other meaningful artefacts/materials). The provenance sources of the fossil resins found in the various contexts are assessed through well-established archaeometric analytical methods; several samples have been specifically analysed in the framework of the research project. An original morphological classification of amber objects has been developed, with the aim of recognising patterns of amber distribution and distinct connections between specific cultural/geographic areas. Advanced archaeological theories and methodologies, among which the Network Analysis, are applied in order to evaluate and interpret fluctuations in amber availability in the various regions, interconnections between micro and macro regions, directionality of amber circulation, significance of amber at a local and superregional level and its role in the Bronze Age exchange network.

The dissertation comprises 620 pages, plus three appendixes presenting additional materials (the contingency tables developed by the Author to seriate the amber artefacts according to morphological types; the complete catalogue of typologically classified amber finds). The bibliography (64 pages long) is accurate, exhaustive and up-to-date. Previous works on the various subjects considered in the dissertation are fairly treated.

The thesis is well-constructed and engaging. Division into chapters has been conveniently done according to the various steps and aims of the research, from the acquisition of data with its critical reconsideration, to data analysis and processing, to the investigation and definition of interactions patterns to the interpretation in the light of the theoretical framework(s). Conclusions regarding the specific issues investigated are discussed at the end of each chapter; these are then incorporated in subsequent level of analysis undertaken. One of the advantages of such a structure is that the chapters, consisting of integral parts, can be read separately.

The first chapter offers a comprehensive introduction to the topic of amber in archaeological studies and clearly presents the aims of the research. A good section of this chapter is devoted to the discussion of the theoretical framework and assumptions underlying the work. The perspective





embraced, which is consistently followed in all the steps of the research, is explicitly explained here.

Then amber(s) as raw material is defined and the range of fossil resins available and used to make artefacts in Prehistory is described. In the final sections of the chapter a detailed account of the history of archaeological studies on amber in prehistory is given. It offers a critical insight into both the Italian and the western-central Balkans studies on this topic, and how the political and cultural dimensions on the one side, and the scientific advancement on the other, affected and informed the studies through time.

The first part of the dissertation (chapters 2 and 3) is mainly devoted to the analysis and processing of data and preliminary assessment of amber networks in the circum-Adriatic area. In chapter 2, the districts/provinces of amber receptions (individual regions) considered as reference units for the following analyses are defined (34 districts in total). These will be then grouped into five macro-zones to offer a synoptic view of some of the aspects and processes under scrutiny. Then a critical issue is addressed: that of the chronological breakdown of both the sites taken into consideration and the individual contexts yielding ambers. This was not an easy task, as absolute dates are not extensively available, reliable stratigraphic data are lacking for several contexts, ambers come as stray finds in various cases. Moreover, scholars working in the various regions under scrutiny, belonging to different traditions of study, have adopted diverse reference systems and terminologies for relative chronology and cultural attributions. A detailed account of each context with a critical reconsideration of available data to chronologically define the amber finds is given. The chronological attribution of individual contexts/objects is summarised in a series of tables (one for each of the districts considered). Thus, the archaeometric analyses for determining the provenance sources of ambers are discussed and results (both those already available and those obtained during the research project) are presented and again summarised in specific tables. Finally, an assessment of amber availability and circulation in the various districts and macro-areas per period is offered. This is also visualised by means of useful synoptic schemes.

The morphological classification of amber objects from the areas under scrutiny, especially designed for the purposes of the research, is presented in chapter 3. Firstly, previous typological analyses of Bronze Age ambers from present-day Italy and the western and central Balkans are discussed, as well as other recent proposals concerning ambers from diverse European areas. Strong and weak points of these proposals are highlighted. The embraced methodological approach and criteria applied to build the adopted typology are clearly illustrated. This is based on a functional approach for the distinction of main typological groups and then on the non-hierarchical classification of a set of 'individual features' (morphologic and stylistic features), which allows for a thorough investigation of type distribution per period and contexts based on statistical analyses of the dataset. A total of 1170 objects have been classified. The analysis of type occurrence per period is based on the seriation method, which is rightly applied in the 'constraint mode', using the chronology of the contexts as a known fix parameter. The spatial distribution of types belonging to each group and their commonness per macro-regions is analysed through two-mode networks of relationships between regions and individual types. The final part of the chapter is devoted to the investigation of the interregional circulation of amber per period. A detailed insight is achieved by means of the Network Analysis (adopting a core-periphery analysis) in which formal similarities





(epitomised by types and also encompassing know-how transmission) are used as proxies for interactions between units involved in amber circulation(s). Besides ambers, other artefacts associated with ambers, bronze objects in particular, are considered in order to evaluate the level of connections between regions and the transformation of networks over time.

In the second part of the dissertation (chapters 4 and 5) results obtained are discussed in the light of interpretive models and a comprehensive picture is offered of the modes and meanings of amber consumption and exchange on both the circum-Adriatic area and the northern (central and northern Europe) and southern areas (the Aegean world) it was in contact with.

Chapter 4 is devoted to the analysis of the patterns of use of amber in the different regions and the social meaning(s) that ambers embodied in space and time. This is done firstly through an accurate examination of depositional contexts of ambers, according to main categories of contexts (settlements, cemeteries, hoards). Each category is introduced by a theoretical discussion that provides a very good background for understanding what kinds of information can be drawn from it. Interesting results do emerge, such as the association of ambers mostly with female individuals. In the second part of the chapter the occurrence, social appropriation and value(s) of amber in the studied areas is interpreted against the background of theoretical models.

Chapter 5 deals with the macro-scale analysis of amber circulation across central-northern Europe, and the Aegean, assessing the role of circum-Adriatic regions in this process. The circulation of other raw materials, goods and models (i.e. metals, Aegean-Mycenaean pottery) is taken into consideration to better understand the patterns of amber exchange. This is also seen in the framework of the 'European Bronze Age world system', stressing the complexity of interactions and multiple roles of regions and sites in the system.

Finally, the main achieved results and general conclusions are summarised in the final section.

Illustrations in general are adequate and clear. In chapter 2 a series of lists is given presenting the considered sites with relevant information per each regional district (tables 1-34). These could be usefully grouped into more general lists (perhaps per macro-regions). Moreover, the contexts subjected to amber provenance analysis are listed in separate tables (tables 35-36), yet this information could be integrated in the previous lists. It will be also beneficial for the reader to include the information regarding the provenance source of amber in the catalogue of typologically classified object.

### Specific comments

The submitted dissertation is very accurate, clearly written and indeed presents an original view on the circulation of amber across central Mediterranean and beyond during the Bronze Age.

The research has requested a great deal of work and has dealt with a series of difficult tasks and challenging problems, which M. Cwaliński has properly addressed.

It should be noted that every step of this research is grounded on a solid methodological background and in-depth knowledge of theoretical models to explain Bronze Age socio-economic phenomena.





I believe that this work will represent a reference point for future research considering amber circulation in the Bronze Age central Mediterranean, which played a significant role in the dynamics of exchange and interactions characterising these communities.

One of the strong points of the research is that amber objects and amber yielding contexts from both the eastern and western area of the Adriatic are examined in an integrated analysis. A comprehensive analysis of this kind has never been done, as scholars have traditionally tended to confine the research within present-day political borders. Such integrated analysis involves dealing with a very extensive and fragmented literature, written in diverse languages, which M. Cwaliński has thoroughly mastered.

Another difficult task was that of the chronological definition of contexts and the chronological correlation between the various areas considered, in which different terminologies and relative chronologies are traditionally adopted. Resorting to absolute chronology (alas, not extensively available) and calendar dates to define phase sequences and synchronise relative chronologies in a unified system is a viable and optimal solution, which has been embraced in this work. I wonder, however, whether it was necessary to further adopt a periodisation system (i.e. division of the Bronze Age into phases: EBA, MBA, etc.) rather than simply synchronise regional cultural aspects within the general calendar framework and then relate it with the central-northern European and Aegean chronologies. On the one hand, referring to Bronze Age general periodisations indeed meets a widespread tradition in prehistoric archaeology and offers convenient general labels. Yet, on the other hand, these partitions hardly correspond to the timing of socio-economic changes in each region, which probably did not happen simultaneously in such a vast area.

A further strong point is that Cwaliński expands the discourse on amber circulation rising attention and stressing the role of communities involved in the amber circulation as amber 'consumers' themselves rather than mere intermediaries along the network. Interesting results in this respect has been achieved not only by the contextual analysis of amber finds, but also by applying theoretical models such as K. Pomian's concept of 'semiophore' and Jackson's model of information economy to usefully interpret fluctuations in amber reception and exchange in terms of amber cultural acceptance and its growing/decreasing exchange value.

The connections between regional districts highlighted through the Networks Analysis on the bases of affinities in amber objects is tested and sustained by the analysis of the circulation of other categories of find, bronze artefacts in particular. This analysis, very well conducted, also offers some new insights into previously unnoticed shared models across the two sides of the Adriatic.

A problematic point that deserves some attention is that of the areas in the circum-Adriatic zone which, at present, lack evidence of amber and therefore have not been considered in this work. The author itself stresses how amber can easily disappear from the archaeological record, so 'absence of evidence', at least in some cases, can be reconsidered in the light of further data.

Some of these non-yielding ambers regions lie in between provinces of amber reception which show evidence of interactions between one another. While in some cases non-yielding amber regions could have been easily bypassed by direct connections (mostly maritime) between distant





regions of amber reception, in other cases this seems more difficult. Interconnections between districts of amber reception and areas in between, which may well represent intermediate points in the chain of exchange, are sometimes testified by the occurrence of imports/ shared models of non-amber artefacts, among which pottery. This problem is clearly mentioned by the Author (i.e. at p. 330), and of course addressing it would have required to enlarge the research beyond its main goals. However, some cases can be worth considering in the discussion. For instance, the occurrence of Capo Graziano type pottery (characteristic production of the Aeolian Islands between the 22<sup>nd</sup> and the 15<sup>th</sup> centuries BC) not only in northern Sicily and southern Tyrrhenian coastal zones, but also in the Phlegraean archipelago and in northern Lazio (Luni sul Mignone), together with other pieces of evidence, testifies to the existence of a local Tyrrhenian maritime networks in which the Aeolian archipelago played a significant role. This network, reaching northern Lazio/ Tuscany (where succinite amber is sporadically attested already in the EBA/MBA), may have channelled succinite amber, perhaps representing a link between north-eastern Italy and the southern Tyrrhenian. Although clear typological affinities between ambers from some of these regions are lacking, this pottery evidence may help in counterbalancing archaeological and research biases. Another example is given by close stylistic similarities between northern Apulian pottery and ceramic productions from Dalmatia between the 1650-1300 BC ca. (MBA), paralleled by the presence of Apennine-like pottery in Dalmatia. Although Dalmatia appears to be devoid of amber in this period, this interconnection may well combine with the links between Northern Apulia and central Balkans districts highlighted by the Author on the basis of parallels between both amber types and bronze items.

There are some minor remarks which I would like to mention here.

In the late 19<sup>th</sup> century prehistoric archaeology (and not archaeology *tout court*) in Italy was labelled as 'palaeoethnology' and already distinguished from 'palaeontology' (p. 43). L. Pigorini was one of the representative figures of this discipline.

It is said that 1170 amber artefacts could be classified out of a total of 2225 amber objects (p. 266). It would be useful to produce a chart showing the number of non-classified ambers/contexts per region.

Knives with a curved blade and two-three rivets from northern Apulia (i.e. from Trinitapoli 'Bronzes hypogeum') are indeed considered to have an Albanian or Aegeo-Albanian origin and are worth mentioning in the discussion (p. 380). However, these can be arguably dated to the 1600-1300 BC ca (MBA) rather to the 1300-1150 BC ca. (LBA). A very similar knife comes from the burial of Castello Pignatelli (Minervino Murge) which has provided the 14C date 3150±40 BP, 1510-1360 BC (Venturo 2010 in: G. Recchia, F. Radina (eds.), *Ambra per Agamennone. Indigeni e Micenei tra Adriatico, Ionio ed Egeo*, Bari; the knife was erroneously described as a dagger). The depositional context of these knives at the Bronzes Hypogeum, where they are clustered in the far recess of chamber C, speaks in favour of these belonging to the early funerary phase of the hypogeum.

Minor misspellings occur which are negligible. However, some names of Italian sites need to be corrected: Mollina di Ledro = Molina di Ledro; Colle della Molla = Colle della Mola; S. Ambrosio = S. Ambrogio.



### Final evaluation statement

This thesis represents an excellent work that meets high international standards of research in Archaeology. The adopted methodology, the analysis and processing of data as well as the interpretative hypotheses are original and well presented. A great deal of work has been devoted to this thesis and the achieved results significantly contribute to advancing the knowledge on Bronze Age societies and exchange networks in the Central Mediterranean and neighbouring areas. I really appreciate the scientific rigour and the theoretical-methodological expertise of the candidate.

Taking the above into account, I believe that the thesis by Mateusz Cwaliński MA, entitled "Circum-Adriatic branch of the amber route in the Bronze Age" meets the requirements of a doctoral dissertation and therefore I am applying for admission of Mateusz Cwaliński MA to the next stages of the doctoral process.

Furthermore, given the exceptional quality of the thesis by Mateusz Cwaliński MA, I am applying for it to be awarded.

Rome 30 May 2021

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