

ISSUES ON PRE AND PROTOHISTORIC AMBER

In memoriam Curt W. Beck

by Călin GHEMIȘ

Argument¹

Amber, together with other materials (tin, graphite, and ivory, hippopotamus teeth, copper and bronze) is the object and subject of commerce whose main characteristic is the wideness of the area where it develops, including, practically, almost all the known ancient world.

Starting with the first stage of the Bronze Age, the diffusion of amber, mostly of Baltic origin, reaches the territory of Small Asia. This fact was more than once argued by researchers like: A. Spekke, C. W. Beck, J. M. Todd, N. N. Cattachio, A. Palavestra and A. Pydyn².

Therefore, amber traffic is one component of the unitary complex represented by the commerce of prehistoric freight traffic with different materials. The wideness of these relations, in the simple meaning of the word, knew in the prehistoric period a progressive development, a fact that has been confirmed by the archaeological discoveries.

We are not able to describe clear and detailed stages of these exchanging activities, for the amber discoveries multiplied once with the passing of time, culminating in the 4th century B.C. when true masterpieces of the figurative amber art³ were discovered.

Regarding the so-called "amber way", we believe that the term introduced in the 20th century by J. M. de Navarro⁴ must be analyzed once again taking into consideration that it was met mostly in the literature with an axiomatic value and, therefore, in this stage of research, we can not speak of a certain "way" of the amber in the prehistorical period.

Our discourse is based mostly on the amber objects discovered in an area that includes the extreme north of Europe and the Levant. The sources analysis is a difficult problem to solve if we take into consideration only the Summerian -Akkadian literature. What is known in these amber discoveries analysis? First of all, it places these discoveries from Romania in a larger context related to other findings, and so it offers newer information on the influences that were received and accepted, and different exchanging relations. Even

¹ We thank all those who, in a way or another, contributed to the genesis of this study: prof. D. Adamesteanu who drew our attention on the amber discoveries from Basilicata, making his personal library available to us, prof. Fr. Pomponio for his patience while he coordinated our study period at Messina University, prof F. Gogâltan for his suggestions and discussions, the colleagues of the "Țara Crișurilor" Museum from Oradea.

² The author analyzes the complex problematic of amber from all points of view.

³ The style of the figurative amber art appears in the 8th c. B.C. and evolves until the beginning of the 4th c. B.C. Its appearance may be regarded as the result of different influences that came, mostly, from the Greek culture, in the ethruscian-lazial area, that is also the origin of the first objects made in this manner. This specific style develops during the next centuries and the most representative pieces came from the Greek area. Amber has a Baltic provenience and it was made in the local workshops. This phenomenon is similar to that which happened 2 centuries earlier within the Mesopotamian cultural space.

⁴ Navarro's theory, later completed by other researchers must be seen in the light of some new findings. For the prehistorical periods, at least, it is needed also the analysis of other artifacts which together to amber, belong to a system of commerce that was very well articulated and that supposes the re-interpretation of some bronze deposits.

if they are found in a small number, from a cultural point of view, they seem to be specific to communities belonging to the late Bronze Age. The artifacts are generally ornamental objects and less the accessories of other objects like weapons, fibulae or pendants.

Summerian sources on amber⁵.

1. "I could be as worthy as an amber bead can be to you"⁶
2. "and when I wiped my lips off with amber..."⁷
3. "My king had turned against the yellow amber...
The angry master of the lands spoke...
Ninurta, son of Enlil cursed
You rose against me, against my coming
You shall be together with my other rocks, the first to enter my workshop
Prepare yourself for all that you shall become!
Yellow amber, you shall be the daily sacrifice of my craftsmen!"⁸
4. "I have a cart for you; it will have golden wheels and its spokes will be made of amber"⁹

The four sources mentioned above, make up the oldest sources that we have and know. The first text comes from a hymn dedicated to Innana/Ishtar and it is the oldest of them all, dated from the beginning of the Bronze Age, the period that corresponds, indeed, to the start of the amber spreading in this area.

A statistic from 1991¹⁰ revealed that the majority of the objects made by amber had a Baltic origin. The amber objects came through different roads or routs that were probably continental; the quantity of amber is restrained, which means that the commerce was limited to the elite population. Amber was not the only material commercialized but there were also other raw materials.

The most interesting text, from our point of view, is the third one. It belongs to a relatively recent published poem, named "Poem of the labor of Ninurta"¹¹. The hero of the poem fights the "rocks of the mountain", a part of which is the hero's ally and the other one, his enemy. What we need to underline is that the enemy side is composed by rocks that were imported in the space between Tiger and Euphrates from the most various areas. Also, it is no coincidence that the fight took place on a territory that was unknown in the oldest map that is in our possession and these territories were called not by their names but "the land where you can not see the sun", "the lands over the mountains" or "the kingdoms of semi-obscurity"¹² that actually bordered the world that geographers from ancient Summer knew.

Every rock is punished depending on its role in the conflict. The amber is punished to be the daily offer of the jewelers – a fact that highlights the position of the amber. The situation encountered in this text is confirmed by the discovery at Kalhu (ancient Nimrud) where, a statue of Assur-nasir-apal was buried in the foundation of the temple, as an offering. Moreover, most of the Sumerian royal statues and not only, are made of rare materials and

⁵ We present what we believe are the most representative texts related to the subject.

⁶ Landsberger, 1967, 291.

⁷ Kramer, 1971, 131, the text comes from the Blessing of Shulgi (2094 – 2047 BC), one of the initiators of the Sumerian Renaissance.

⁸ Van Dijk, 1983, column 524-530 – the paragraph that talks about amber is: *qar-ra.du ana al-ga-misi*, is represented by *na₄ algamesh*, where *na* is a determinant for stone.

⁹ Dailey, 1996, VI, 11.

¹⁰ Todd, 1991- the analysis was made by Vassar institute from New York, specialist in these kind of analyses.

¹¹ Van Dijk, 1983, passim.

¹² Stahl, 1983, 21

they used to belong exclusively to the royal class. In the Sumerian royal art cannons, the dynast is represented by Baltic origin amber¹³. Speaking of epigraphy, we know that amber was represented by *na₄ algamesh*, a term described by the grammalogue *in-sin*¹⁴.

The evolution of this grammalogue is the following: somewhere at the beginning of the 3rd millennium BC the sign *in-sin* or *elmeshu* meant a smelly “stone” with particular properties; the analysis of this grammalogue¹⁵, also, the reanalysis of some texts drove us to the conclusion that it was the grammalogue that designated amber¹⁶.

Greek sources on amber

The oldest Greek mentions about amber appear in Homer’s *Odyssey*:

“How beautiful resounds through this hall!
What golden, silver,
Brass and amber and ivory beaming!”¹⁷

“...with a necklace made of gold and amber beads.
The slaves and the mother
seek it with their eyes”¹⁸

“...a skillfully made necklace,
Made of gold and amber beads that shone
Like sun rays”¹⁹

We have chosen the analysis of this particular Greek source because the other ones dissolve in different digressions related to the origins of amber and the sources that actually discuss the provenience of this resin and the routes where it used to circulate are very few.

The Greek mythology related to amber is very rich. The Greek word for amber was *hlectron*; it had a noble origin and it was related to solar believes. It was thought that amber was the materialization of the Pleiades’ tears, shed when Zeus stroke their brother. The ancient world valued amber very much for its rareness and its physical properties²⁰.

¹³ Spekke, 1957, 19, pl. III.

¹⁴ Labat, 1943, 526.

¹⁵ Ibidem, the French author analyzes this problem under several aspects, from which, he underlines the epigraphic one.

¹⁶ Landsberg, 1967, 289. Bottero, Kramer, 1996.

¹⁷ *Odyssey*, IV, 99-101

¹⁸ *Odyssey*, XV, 607-608

¹⁹ *Odyssey*, XVIII, 380-383

²⁰ Amber is a fossil resin secreted by different species of trees; the most known is *Pinus succinifera*, which was determined by H. Conventz in 1890. the resin coagulated in the Tertiary together with other approximately 20 species of fossil resin (Zalewska, 1974, 15). From a chemical point of view, amber is classified as a caustobiolite, as it has an organic composition. When heated to 170 Celsius degrees it becomes viscid and between 280 and 290 Celsius degrees, it melts and it becomes transparent; it dissolves in alcohol or cold sulfuric acid (Zalewska, 1974, 35); its toughness is 2-2,5 on the Moks scale and it was situated between gyps and calcite. Its specific structure is amorphous, not crystalline; there are porous structured amber with a weight between 1050 and 1096. Besides these properties, amber contains more than 500 insect species, seeds, or other materials caught in the moment of coagulation. The color of amber varies from brown to yellow, orange or even black. Its denominations are also peculiar. The polish terminology knows over 200 names for different kinds of amber; in the Sumerian – Acadian literature it is called *elmeshu*; *hlectron* or *electron* in the ancient Greece (it is not to be mistaken with the natural mixed metal of silver and gold, gold and silver, known by the same name, mostly due to its color – pale-yellow); the Latin word was *sucinum* or *glesum*, *anbar*, in Arab, that was borrowed by English and transformed into amber, the polish main term is *bursztyn*, inherited from old German where it appears as *brenenstein* – burned rock, or *jantar* – from the Lithuanian *gentaras*, the form used by almost all Slavonic peoples; in old Romanian literature, amber was called whether *chihlimbar* or *ambra*. The species

From our point of view, the most important text is that from the *Odyssey*, IV 99-101: "How beautiful resounds through this hall! / What golden, silver, / Brass and amber and ivory beaming!" that, regarded as an ensemble, hides a reality not to be neglected, that is the enumeration of the materials that were imported in Aegean world.

The archaeological discoveries are once again the argument of our assertion. The most representative amber pieces are the Tirinth style beads, whose spreading covers the whole Levant and it is related to the Mycenaean traffic in Mediterranean space. The type of the piece is unitary and from a typological point of view, there are rectangle shaped beads with round or circular sections measuring from 1 to 4,5 cm and on their maximum diameter they have a marked vein. The discovery of the Tirinth thesaurus brought new explanations regarding the utility of these objects.

The beads were mounted in circles made of golden wire, shaped like a cross or they were worn as pendants. Obviously, besides these pieces there are many others, especially simple shaped beads, circular with lentoid sections²¹; fibulae accessories or needles are very rare and also appear in the discoveries belonging to Mesopotamia cultural sphere.²²

Amber discoveries from Transylvania.

The repertoire of discoveries.

Cioclovina cu apă (Boşorod, Hunedoara district) - from a deposit found in 1953²³ in the *Cioclovina cu apă* cave result 1000 amber beads of various shapes, and a second part of this deposit, recovered between 1964 and 1968 by Ioan Emödi²⁴ contains 770 amber pieces.

Foieni (Satu Mare district) - in a tomb, together with other pieces of the funerary furniture were discovered two bitronconic beads²⁵.

Igrita cave (Astileu) – in the necropolis there were discovered 5 amber beads of various shapes²⁶.

Şuncuiuş, Mişidului cave (Bihor district) – various shaped amber beads come from a ritual deposit²⁷.

Şuncuiuş, Unguru Mare cave (Bihor district) - in the necropolis belonging to the Igrita group was found an amber bead.²⁸

named *hlectron*, considered the gold of the north, is a kind of amber with lemon-yellow to chestnut shades, it has a compact structure, perfectly transparent and it is the most appreciated amber in all times.

²¹ One of the most important discoveries was that of Cape Gelidonya: a Mycenaean kayak shipwrecked because of a storm where there were discovered glass ingots, hippopotamus teeth, copper Cyprus ingots with weight marks, moreover, an amber object of Baltic origin and one of antimony which could not be analyzed because its state of severe degradation. All the complex was dated LHIIIC (Bass, 1986, 286; Rutter, 1997, R26, 9).

²² See the needle with amber head, ornamented in Cyprus style, discovered at Abu Huwan (Todd, 1985, 293), in the level that belongs to the late Bronze Age.

²³ The deposit contains 68 ampyxes with an embroidered body, 4 falers, 17 tutulis, 1528 bronze buttons, 80 embroidered pendants with perforated cane, 14 buttons made of bronze plate, 251 saltaleons, 17 links of bronze wire with a triangular section, 500 beads of faience, 1000 beads of amber, 1500 beads of glass paste and 2 psalia made of antler (Comsa, 1966, 170); the second lot contains a falers of bronze, 326 bronze buttons, one bronze tutulus, one conical ampyx with embroidered body, 10 half-moon embroidered pendants with perforated cane, 6 saltaleons, 2 psalia of antler, 520 antimony beads, 70 beads made of white glass paste, 825 blue glass paste and 770 amber beads (Emödi, 1978, 485 sqq.)

²⁴ We thank Mr. Ioan Emödi for his permitting us to study the second lot of this important deposit.

²⁵ Nemeti, 1978, 121.

²⁶ Emödi, 1982, 524, 42.

²⁷ Chidiosan, Emödi, 1981, 164.

²⁸ an unpublished material, the piece origins from a deposit, from the Sacred gallery and it is associated to a bronze saltaleoni.

Even if there are just a few centers of discoveries, there is a large number of findings (1820, without counting the fragmented pieces) that needs a detailed analysis of these artifacts. Chronologically, the oldest pieces come from Foieni, pieces that appear in a post - Otomani III²⁹ medium that are placed by the new researches in the end of the Otomani culture, and from a cultural point of view, in the landscape of Cehlăuț group³⁰.

The other amber objects that were discovered are specific to Igrîța group, whose evolution must be analysed³¹ once again in a larger context. The deposits that are specific to this relatively recent group, reunited under the name of Arpășel type³² deposits superpose the spreading area of the Igrîța group, excluding the deposit from Cioclovina cu apă and other infiltrations from the Mureș river valley.

From a typological point of view, most of the objects are beads of various types; a single piece seems to have had a different destination that is a fibula element³³. This fact can be demonstrated by its form and also by the slots placed on the sides of the attaching orifice of the object.

Amber pieces appear in complexes that are very different and therefore, they need a specific approach.

The biggest quantity of amber was found in the great deposit from Cioclovina. Together with bronze pieces there are glass pieces, pearly paste glass pieces (which may be a different kind of glass) and antimony – an aspect that raises the documentary value of the deposit³⁴.

Proportionally, the bronze objects represent 40 % of the composition of the deposit; from the utility of the object point of view, 99% are ornamental objects, while the rest are psalia (we do not exclude the possibility that the tutuli, conical pendant, calotiform buttons may have been part of an individual's equipment or harness). The most probable supposition is that the deposit belonged to a merchant. The other discoveries of amber objects appear in contexts that were interpreted many times as having a funerary character. With the exception of the object discovered at Foieni, all others are concentrated in the caves of the Crișu Repede defile.

The problem of these discoveries is that it is very difficult to interpret them in the present stage of the research. There are two points that bring us additional explanation on this deposit. The two points, Ungurului cave and Mișidului cave, provide us with very interesting discoveries in different sectors.

The situation in Peștera Ungurului is the following: in the final gallery, long of approximately 150 meters and 0,40 – 3 meters broad, under a stratum of clay that has been washed here and there by water, there was a system of "gours" or small basins, that were used as places to deposit the archaeological inventors (the entire inventory is mixed with lots of ashes and bone rests).

In the Mișidului cave, during the 2000 campaign, under the Dacian sedimentation level, appeared a sedimentation of ceramic fragments, ash and other pieces that were deposited directly on the soil without a fitting to begin with; the sedimentation from this cavity does not contain amber pieces but has certain analogies with the sedimentation at

²⁹ Nemeti, 1979, 122.

³⁰ Kacso, 1991, Kacso 1999a, Kacso 1999b.

³¹ N. Chidioșan and I. Emödi established the evolution of this group based more on the metallic pieces of the discoveries, but, the detailed analysis of the ceramics shows that what we deal with are much more phases of this group's evolution. The new discoveries impose an analysis of the area of diffusion of the mentioned group and implicitly, one of the aspects correlated to it.

³² Kacso 1995;

³³ the piece may be found in the lot that was recovered by Emödi

³⁴ We do not have information to sustain that the enumerated pieces were analyzed for the establishment of their origin; the lack of information on the glass and antimony objects makes it impossible for us to clarify some particular aspects regarding Transylvania's prehistory.

Hodoş³⁵, Biharea³⁶ and Suplacu de Barcău³⁷. The inventory that was recovered by Emödi in the 80's it is very rich, it was "hidden" in hardly accessible zone and the objects were deposited directly on the bed of clay and calcite of the cavity. The situation is similar to the older and more recent discoveries from the "Sacred Gallery" in the Ungurului cave. During the surface observations that were made in this campaign, in the Mişidului cave we have found out that a part of the sedimentation was marked by little rings from the river rocks that were destroyed afterwards by tourists, fragments of these rings preserved on different lengths and were studied by the following campaigns. As mentioned above, the deposits are piles of ashes and fragments and therefore, their interpretation as funerary deposits may be infirmed by the fact that until present days, there were no human bones or fragments found there. Initially, the amber pieces were not a part of this deposit, given that amber melts at not such a high temperature spreading a pleasant smell³⁸.

This aspect should not be neglected in the interpretation of these objects taking in to consideration the fact that the amber objects reached these complexes after the cinerary inventory has been deposited. A natural question is raised: who was purified through this ritual? In the present state of research it is premature to affirm anything and the restructure of the ritual is also a matter of speculation. Another possible question is: too whom was this ritual dedicated? That is in case in which these are not funerary deposits. The possibility that these were offerings dedicated to underground deities should also not be excluded. But this aspect may be infirmed by the set of beliefs related to amber, believes that place the amber in contexts correlated with the sun. Anyway, it is clear that most of the objects found in the caves do not appear arbitrarily in the archaeological contexts enumerated above and it is probable that next to the intrinsic value of the object they had also a valence under the impulse of some influences came from the south and the north, it is one of the first groups to use the technique red/black, prefiguring the appearance of the horizon with ornamental ceramics and Gava type grooves also contributing to its genesis.

As we have mentioned above, in the context of Igrîta discoveries appear other imported elements, from which, an important place is given to the graphite discoveries, used in a particular stage for the polishing of the exterior surface of the receptacles. Small graphite lumps or pots with graphite paste appear in the discoveries from the Izbîndis³⁹, Igrîta and Unguru Mare⁴⁰ or Hodoş⁴¹.

In the last part of this study we will make a short analysis on the problematic related to the commerce or amber traffic. Regarding the routes on which it circulated it must be sad that these were generally the biggest watercourses convergent to a principal artery, that of the Danube, that crosses the continent from west to east, so the main ramifications are continental routes. The most important information regarding the maritime routes was amber used to circulate come from the analysis of the spreading of Tirinth type beads. As the situation of this diffusion presents itself, most of the findings are concentrated in the areas of the shores, something that underlines not the extent of the traffic of the Mycenaean kayaks, but the fact that maritime routes followed the coast and the exchanges used to take place in a way that remembers the future emporia of the Greek world. From these incipient emporia, the amber pieces are spread in the most various cultural areas. The main settlement with an evident role of "emporium", was Frata Fratessina Polesine⁴², next to this

³⁵ new discoveries

³⁶ Dumitraşcu, Emödi, 1981

³⁷ Ignat, 1984

³⁸ the note above, 15

³⁹ Chidioşan, Emödi, 182, pl.

⁴⁰ Emödi, 1997, with the old bibliography, for the graphite sources from the Latene age, see the newer Rustoiu, Popa, 2000, passim.

⁴¹ the fragment of a cup with interior decoration, new material from the diggings of C. Gemiş and S. Bulzan

⁴² Cattachio, 1989 - the author presents the importance of this site in a more detailed context, fixing the place of the discoveries in the frame of the Mediterranean commerce, this site being one of the most important ones

settlement, much more towards north, in the cultural environment Lausitz, at Komorowo, a center that mediated the exchange activities between the salt mine zone Hallstatt and Baltic sea⁴³.

As it results from the presentation, the majority of the amber pieces from late Bronze age are ornamental pieces, associated to other discoveries (graphite, antimony, gold or bronze pieces), these give a certain idea on the mobility of the prehistorical communities and the materials that were marketed.

The commerce on larger distances, as those from the Mesopotamian cultural area, moderated in the Mediterranean world show once again not as much the circulation of the goods but the circulation of some influences accepted from the behalf of cultures that interact in a very articulated system⁴⁴. A series of other discoveries, as the shells from *Dentalium Vulgare Da Costa*, *Conus mediterraneus*, discovered in the Wietenberg cultural area, at Derşida, ascertain clear bonds with the Mediterranean area from where this jellyfish origin⁴⁵. From Otomani are known the same species, with the mention that at Sălacea, a necklace contained also a shell of *Pectunculus glycimereis*⁴⁶. The *Conus mediterraneus* species (with the two sub-species, *Da Costa* and *Vulgaris*) are as frequent in the Tiszafüred necropolis where appear many times associated to the saltaleons⁴⁷. A special mention deserves the shell *Hippopus Maculatus*, discovered at Dersida, the species origins in the Indian Ocean and reached the settlement also due to commerce⁴⁸.

The complexes with amber objects discoveries are mostly cultic or funerary, less treasured in deposits (and here we refer to the discoveries from Transylvania, still, the phenomenon seems similar to the findings from Pannonia, Balkans, peninsular Greece, Italy and Sicily⁴⁹). This aspect must be underlined once again in the interpretation of the amber discoveries, for the objects themselves may be related to the world beyond believes in prehistory⁵⁰.

A general conclusion that needs to be made in the end of this study is that beside the wide area covered by the spreading of the amber, it belongs to a complex system, articulated by commerce that can be called, indeed, a catalytic agent of the cultures, as it is called by A. Palavestra⁵¹.

Addenda

On the occasion of Fifth international conference on Amber in Archaeology, in Belgrade, Professor Curt Beck has take a sample from Unguru mare cave amber bead. The sample was analyzed at Vassar Institute in New York and the IR bulletin of analyze number R 61/ 8126 shows that the bead is imported Baltic amber.

Translated by Simina Ştef

in order to follow the spread of amber.

⁴³ Malinowski 1982, 114 and image no. 1

⁴⁴ See Pydyn, 1999 - the author discusses more widely the phenomenon of commerce under al aspects, also, Dumitrescu, 1939, 172, an author who chooses the existence of terrestrial routes for the spreading of mycenian swords, together with these swords also circulated other materials.

⁴⁵ Jurcsak, 1984, 113 – shells that origin in the natural environment and less from some fossil points.

⁴⁶ Jurcsak, 1984, pl. 2, no 1 – the necklace contain more jellyfish species.

⁴⁷ Kovacs, 1975, pieces of *Conus mediterraneus* appear in the graves: 102, 161, 284, D; pl.10, 27, Pl. 15, 15, 16, 17, 18, Pl. 27, 12, Pl. 34, D – the richest in objects of this type.

⁴⁸ *ibidem*, pl. 2, no 2.

⁴⁹ Benabo-Brea-Cavalier, 1956, 76; Benabo-Brea-Cavalier, 1960, 111, 112, 118, 121, Benabo-Brea, 1960, 162.

⁵⁰ Chevalier Gheerbrant, 1994, 302-303; Gergova 1994, 70 – believes related to amber; Spekke, 1954 – the main sources; Tacitus, 1963, chapter XLV; we will get back on the sources regarding amber.

⁵¹ A. Palavestra, 1993, 289.

Literature

Bass 1986,

- G.F.Bass, - *A Bronze Age shipwreck at Ulu-Burun (Kas) 1984 campaign*, in, *A.J.A.* 90,3, 1986, 269-296.

Beck, 1982,

- C.W.Beck - *Der Bernsteinhandel: Naturwissenschaftliche Geschihtspunkte*, în, *Savaria*, 16, 1962, 11-25.

Bernabo-Brea-Cavalier, 1956,

- L.Bernabo-Brea - M.Cavalier - *Civilta preistoriche delle isole Eolie*, in, *Bolletino di paletnologia Italiana*, N.S.X, 65, 3-95.

Bernabo-Brea- Cavalier, 1960,

- L.Bernabo-Brea-M.Cavalier - *Meligunis Lipara.La stazione preistorica della Contrada Diana e la Necropoli protostorica di Lipari*, vol. I, Palermo 1960.

Bernabo-Brea 1960,

- L. Bernabo-Brea - *Necropoli a incinerazione della Sicilia protostorica*, în, *Civilta del ferro. Studi publicati nella ricorenza centenaria della scoperta di Villanova*, Bologna, 1960, 147-164.

Carlier, 1994,

- P.Carlier - *Scambi e prestigio*, in, *I Greci*, vol.II. 1994, 282- 284.

Cattachio, 1989,

- N.N.Cattachio - *L'Ambr: produzione e commerci nell Italia preromana*, in, *Italia omnium terrarum parens. La civilta degli Enotri, Choni, Ausoni, Sanniti, Lucani, Bretii,Sicani, Siculi, Elimi*, 1989. Milano,659-696.

Chevalier - Gheerbrant 1994,

- J.Chevalier, A.Gheerbrant - *Dicționar de simboluri*, Bucuresti. 1994.

Chidioșan- Emodi, 1981,

- N.Chidioșan, I.Emodi- *Descoperirile arheologice de la sfârșitul epocii bronzului și începutul Hallstattului în peștera Mișidului, Șuncuiș, jud. Bihor*, în, *Thraco Dacica. II*, 161-167.

Chidioșan - Emodi, 1982,

- N.Chidioșan, I.Emodi - *Descoperirile arheologice din peștera Izbîndiș (comuna Șuncuiș) aparținând grupului cultural Igrîța*, în, *Crisia*, XIII, 17- 32.

Comșa, 1966,

- E.Comșa - *Le depot en bronze du Cioclovina (Carpathes Meridionales)* în, *Acta Archaeologica Carpathica*.VII, 1-2, 1966.

Dailey, 1996

- S.Dailey- *Miths from Mesopotamia*. Londra, 1996.

Dijk 1983,

- J.van Dijk - *Lugal Ud-Me-Lam- bi Nir- Gal, Le recit epique et didactique des travaux de Ninurta du Deluge et de la Nouvelle Creation*, Leiden, 1983.

Dumitrescu, 1939,

- V.Dumitrescu - *Rapiere en bronze du type micenien trouvée au sud-ouest de Bucarest (pres Rșiorii de Vede)*, în, *Dacia*, V-VI, 1935- 1936 (1938), 169- 163.

Emodi, 1978,

- I.Emodi - *Noi date privind depozitul de la Cioclovina*, S.C.I.V.A. 29, 4, 1978, 481- 495.

Emodi, 1980,

- I.Emodi - *Necropola de la sfârșitul epocii bronzului din peștera Igrîța*, SCIVA, 31, 2, 1980, 229-273.

Emodi, 1995,

- I.Emodi - *Descoperiri din epoca bronzului din peștera Mișidului*, în, Crisia, XXV, 1995, 9-

Foltiny 1962,

- S.Foltiny - *Mykenae and Transylvania*, în, *Hungarian Quarterly*, III, 3, 4, 133- 140.

Gergova, 1994,

- D. Gergova - *The treasure from Vulchitrun and the amber route in the Balkans*, în, *The Early Hallstatt period (1200- 700 B.C.) in South-Eastern Europe*, 69-79. Alba-Iulia, 1994.

Hansel 1988,

- B.Hansel - *Mykene und Europe*, în, *Das Mikenische Hellas. Heimat der holden Homers*, 62- 64, Berlin, 1988.

Jurcsák 1984,

- T.Jurcsak - *Piese de origine sudică din așezarea Wietenberg de la Derșida*, în, *Acta. M.P.VII*, 1984, 111- 115.

Kacsó 1990,

- C. Kacsó - *Bronzul târziu în nord.vestul României*, în, *Symposia Thracologica. 8. Carei-Satu- Mare*, 1990, 41-50

Kacso 1995,

- C.Kacso - *Der Hortfund von Arpășel, kr. Bihor*, în, *PAS 10, Bronzefunde aus Rumanien*, Berlin 1995, 81-130.

Kovacs, 1975,

- T.Kovacs - *Tumulus culture cemeteries of Tiszafured*, Reg.Fuz.II, Bp.1975.

Kramer 1971,

- S.N.Kramer - *Le Rite de mariage sacre Dumuzi- Innana*, în, *Revue d'Histoire des Religions CLXXX I*, 2, 1972, 121-146.

Landsberger 1967,

B. Lansberger- *Akkadische- Hebraische-Wortgleichnngen, II, Elmeshu- Hashmal- bernstein*, în, *Festschrift zum 80 Geburtstag von Walter Baumgartner*, Leiden, 1967, 289-298.

Malinowski 1982,

- T.Malinowski, - *L' Ambre jaune baltiqueet les problemes de son exportation pendant les premiers periodes de l'age du Fer*, in, *Savaria*, 16, 1982, (1983), 113-125.

Nemeti 1978,

- I.Nemeti- *Descoperiri de la sfarsitul epocii bronzului din zona Careiului*, in, *SCIVA*, 29, 1, 99-122.

Odiseea,

- Homer - *Odiseea*, trad. G.Murnu, buc.1971.

Palavestra 1993,

- A.Palavestra - *Prajistorijske cilibar na centralom i zapadnom v Balkanu, Prehistoric amber as a catalyst of culture*, rez.289-296. Belgrad 1993.

Pydyn 1999,

- A.Pydyn - *Exchange and cultural interractions. A study of long distance trades and cross-cultural contacts in the Late Bronze Age and Early Iron Age in Central and Eastern Europe*, in, *British Archaeological Reports*, 813, 1999.

Rutter 1999,

- J.B.Rutter - *Prehistoric Archaeology in the Aegean*, http://www.indiana.edu.clssics/aegean_rutter.html.

Spekke 1957,

- A.Spekke, - *The ancient amber routes and the geographical discovery of the Eastern*

Baltic, Stockholm, 1957.

Todd 1993,

- J.M.Todd, - *The continuity of amber artifacts in Ancient Palestine: from Bronze Age to the byzantine*, in, *Amber in Archaeology*, Praga, 1993, 236-248.

Zalewska 1974,

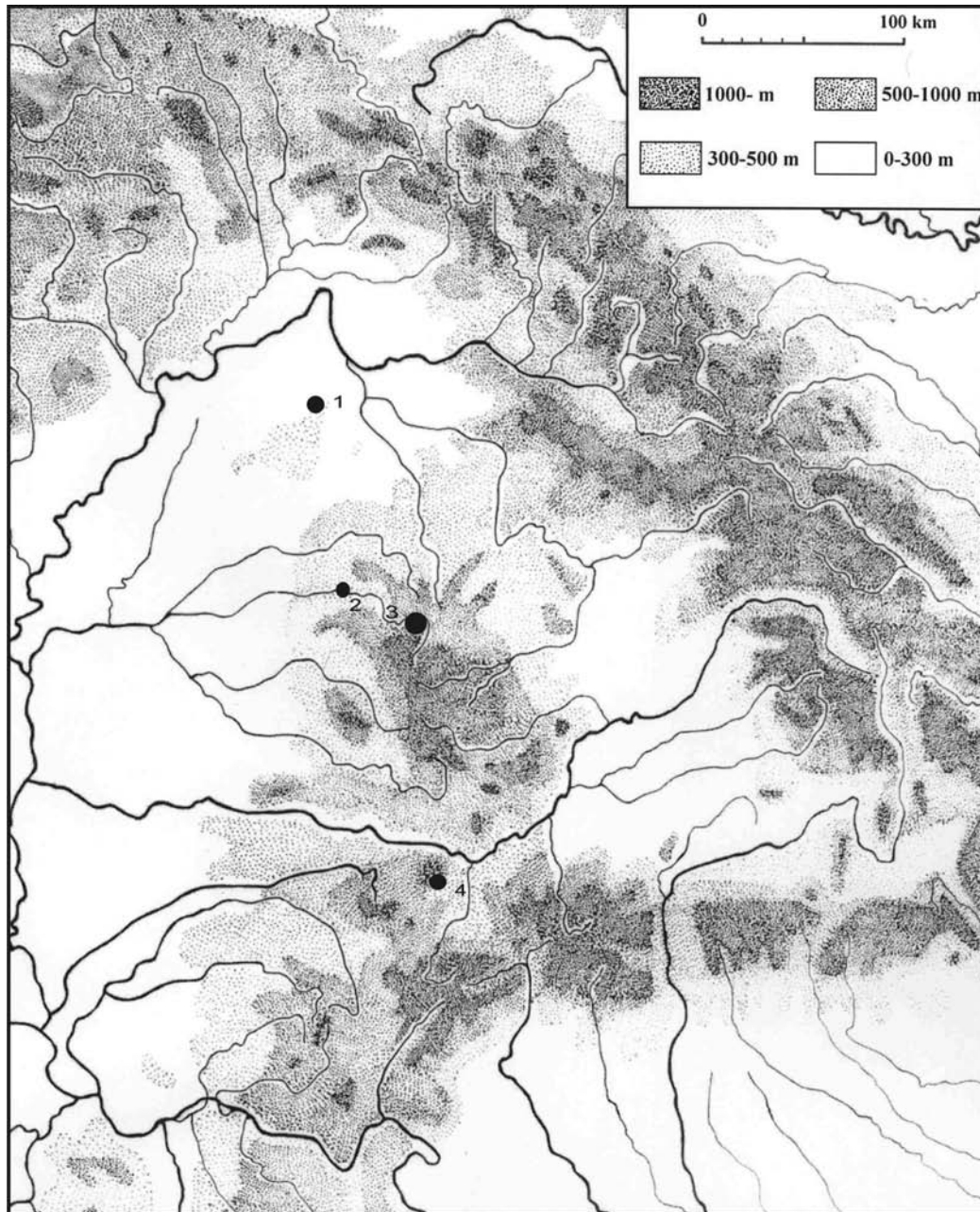
Z.Zalewska,- *Amber in Poland*, Warszaw, 1974.

DISCUȚII ASUPRA CHIHLIMBARULUI PRE ȘI PROTOISTORIC

Rezumat

Prezentul studiu prezintă descoperirile de piese din chihlimbar din Transilvania discutate într- n context mai larg. Cea mai importantă descoperire de acest gen din Transilvania este cea din peștera Cioclovina cu apă (com. Boșorod, jud. Hunedoara), aici alături de pese din chihlimbar fiind descoperite în asociere piese din staniu, bronz, sticlă, os și „pastă sidemie” precum și două piese din os. Din punct de vedere cronologic și cultural aceste descoperiri aparțin intervalului Br.D – Ha A. Majoritatea punctelor cu descoperiri se plasează în aria de răspândire a depozitelor de tip Arpășel, excepție făcând depozitul din peștera Cioclovina, atribuit de unii cercetători seriei Cincu – Suseni.

În addenda este prezentată analiza unei mărele din chihlimbar din peștera Unguru mare efectuată la Vassar Institute – New York, de către regretatul Profesor Curt.W.Beck și Edith Stouth, concluzia celor doi cercetători este că, piesa din peștera Unguru mare este de proveniență baltică. Acest fapt clarifică prveniența pieselor de chihlimbar din zona discutată.



Amber discoveries in Transylvania:

1. Foieni
2. Igrita
3. Șuncuiuș
4. Cioclovina Cave



Plate I. Cioclovina Cave different types of amber bead

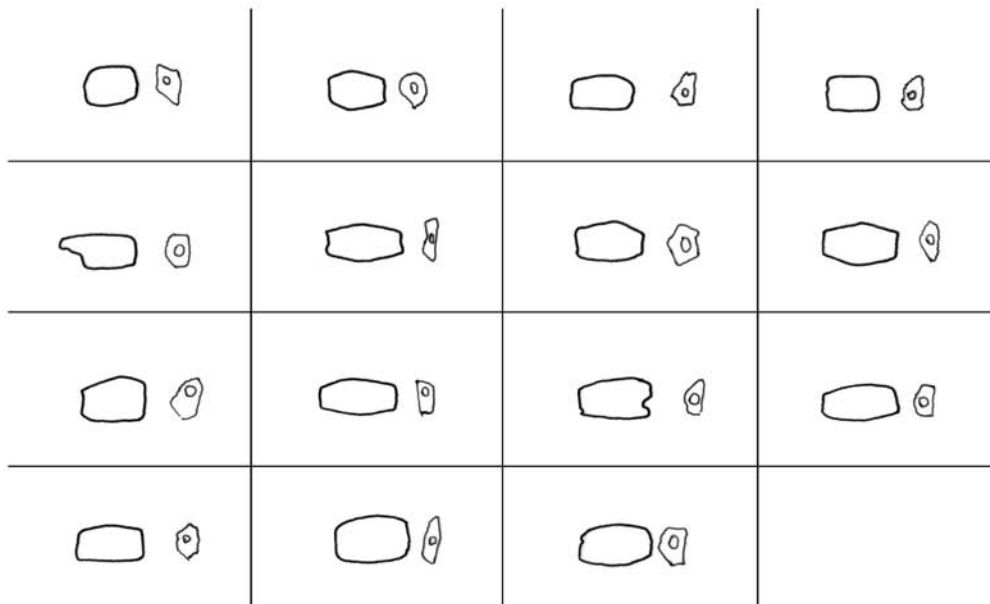
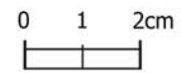
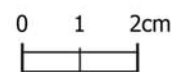


Plate II. Cioclovina Cave different types of amber bead



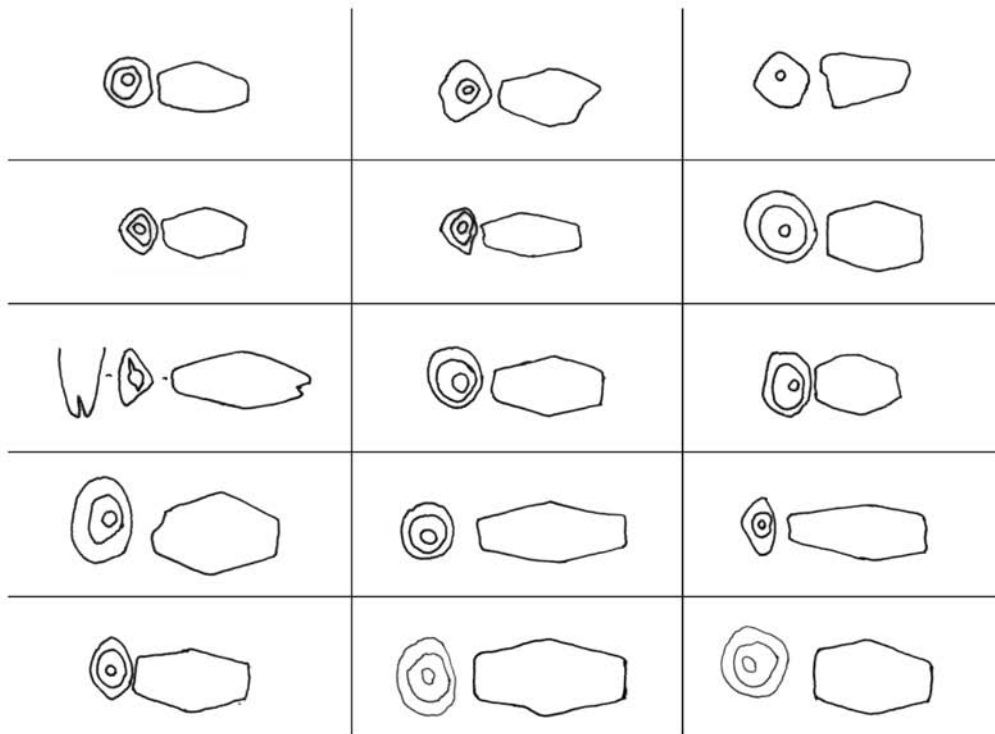


Plate III. Cioclovina Cave different types amber beads

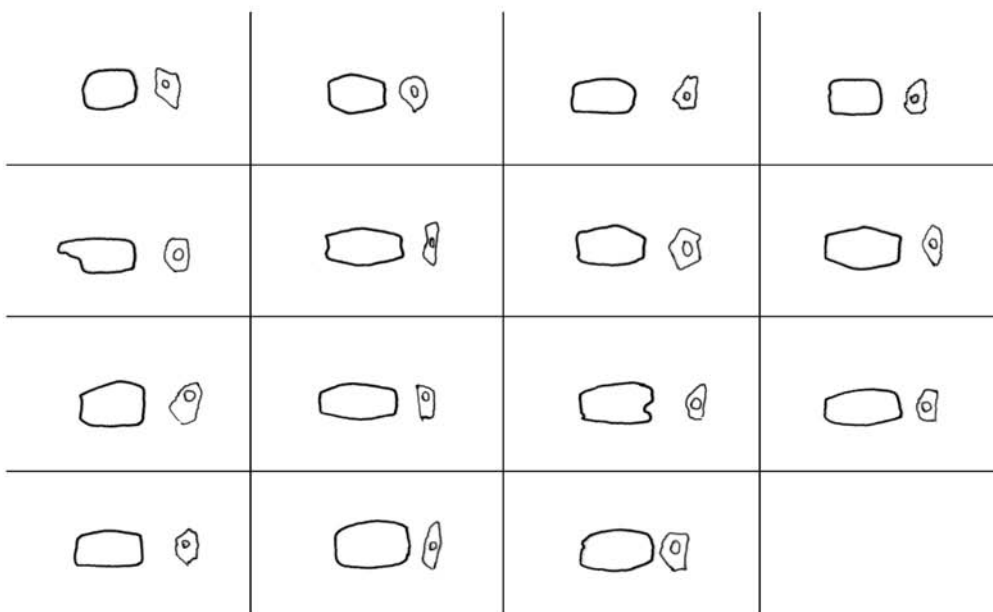
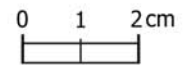
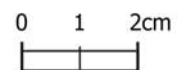
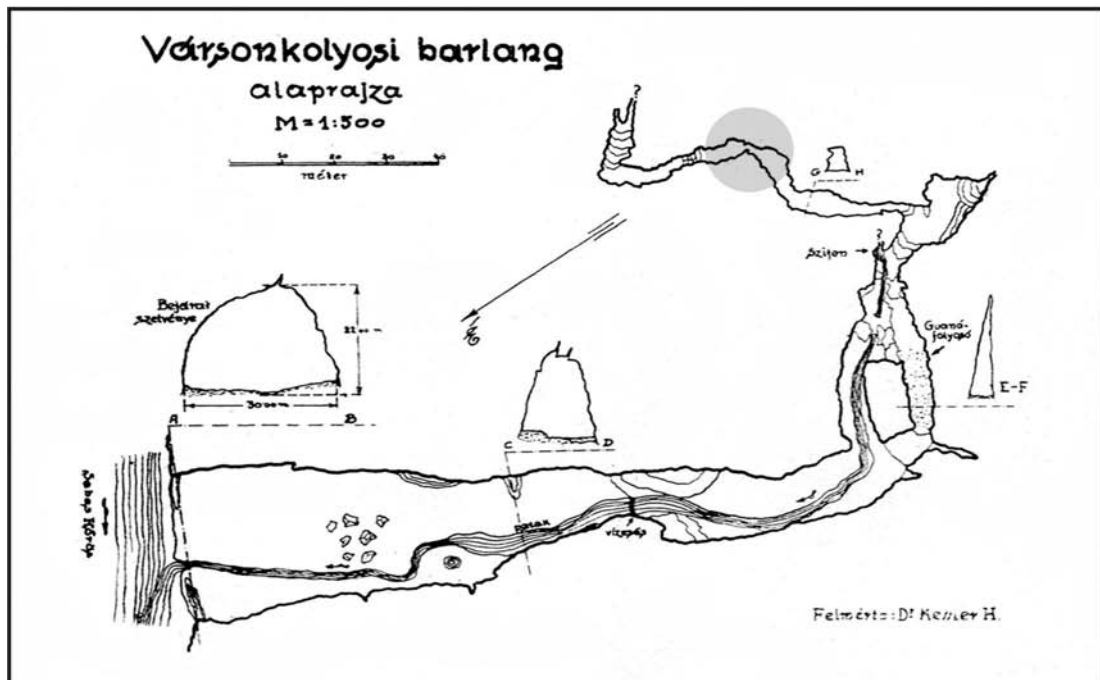


Plate IV. Cioclovina Cave different types amber beads

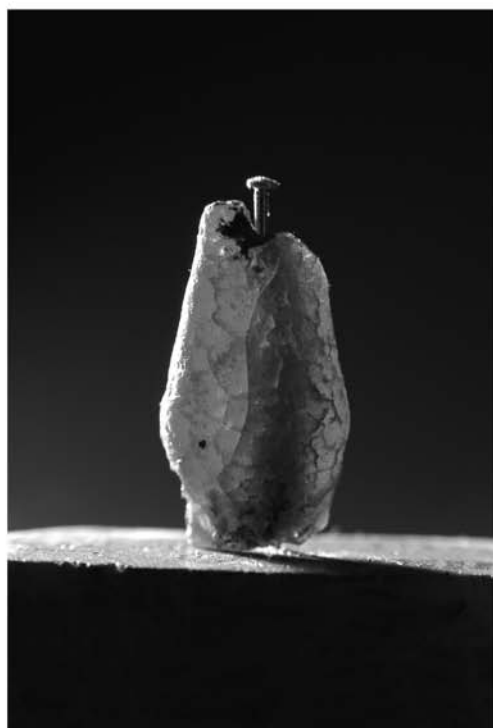




The Unguru Mare Cave - grey spot marks the place of the amber bead discovery



Archeological context of the **Unguru Mare** cave amber bead finding



Unguru Mare - amber bead