

LITHUANIAN AMBER ARTIFACTS IN THE MIDDLE OF THE FIRST MILLENNIUM AND THEIR PROVENANCE WITHIN THE LIMITS OF EASTERN BALTIC REGION

Audronė Bliujienė

LITHUANIAN ART MUSEUM (LITHUANIA)

Abstract

*The spread of amber in Lithuania and its popularity over different periods, application of amber in ornament production, changing trends in amber jewelry wear as well as the links of these customs with gender, sex, and, more generally, with the Lithuanian world outlook, are the issues usually discussed based on ungrounded assumptions that the amber artifacts found in Lithuanian burial sites and the cultural strata of hill-forts and settlements had originated from the Lithuanian coast. It is unexpected, but a credible possibility, that Baltic Sea amber artifacts, belonging to different archeological sites across Lithuania, are not only local products, but also imports via different trade routes. As far as analysis of Lithuanian amber artifacts has established, raw amber was exported from the coast southwards. Lathed and semi-lathed amber beads found at the cemeteries in central Lithuania, the lower Nemunas region and even in coastal Lithuania and dated to the late Roman Iron Age—early Migration period, are imports of several workshops in the lower Vistula, **Kuivavia** areas, Mazurian Lakeland, Sambian peninsula and other regions. On the other hand, it should be noted, that amber beads of common shapes known since the Roman Iron Age onwards, figure-eight shaped beads-pendants and these of other less common shapes, as well as beads and other amber artifacts typical of the Vendel and the Viking Age were produced by local amber craftsmen in coastal Lithuania.*

Introduction.

Though the knowledge provided by written sources on the Baits (*Aestii— hesti, aesti*) in the middle of the first millennium and the Roman period is only of general character, even these short accounts inform on the Baltic peoples and their trade in amber. The Roman historian Publius Cornelius Tacitus (ca 55-120) was the first one to refer to gentes Aestiorum as all the Baltic tribes collectively in his opus *Germania*, 98. Tacitus mentions the gentes Aestiorum being distinct from others, as it is the only tribe of these known to Tacitus, to collect amber (in their language *glaesurn*) on the *Mare Suebicum* (Baltic Sea) coast. Yet, being barbarian, they never explore the nature of amber and do not know it. The gentes *Aestii* bring raw amber to merchants, they take reward for it with surprise (Tacitus, 1972, 45; with Latin checked by Veronika Gerliakienė). This observation by Tacitus is of great value, as besides emphasizing the fact, that the Baits collect amber washed up by the sea, it also points out, that they bring it themselves to markets known to both sides involved in this trade. Since it is known that the Goths left the lower Vistula region in the second century, it is possible to assume that the area where the west Baits collect drift amber includes the lower Vistula region, **Samland** and coastal Lithuania. In modern language that would mean southeastern and eastern regions of the Baltic coast.

The Roman Caius Plinius Secundus (23-79) also mentions trade in amber in his *Naturalis Historia*. The

book tells of a Neron's time expedition by a Roman nobleman (*aeques Romanus*) from Carnuntum *commercia*, a Roman frontier fortress and important trade center in the middle reaches of the Danube, to the Baltic coast (amber-bearing island) to purchase amber. Researchers mentioned by C. Plinius Secundus, linked amber-bearing island with **Samland** peninsula, Lithuanian sea coast or island situated west of Jutland (**Kolendo**, 1985, p. 11-13; Michelbertas, 1995, p. 17-19). However, C. Plinius Secundus also mentions the fact that the Germanic tribes take amber to Pannonia, from where the *Eneti* provide it for the Romans (*Naturalis Historia*, XXXVII, 30-52; translation from Latin by Veronika Gerliakienė).

Glaudius Ptolemy (ca 90-168) in his opus *Geography* mentions two Baltic tribes, Galindians and Sudovians (soudinoi; LIS, 1955, p. 19). These two tribes, having no access to the Baltic shores, could only control the area rich in mined amber in northwest Poland. The letter by the Ostrogoth King Theodoric written around 523-526, besides important political information contains references to trade in amber. This letter was retold by Flavius Magnus Aurelius Gassiodorus (ca 487-ca 578). The letter by Theodoricus proves that the Baits were known in Europe of the fifth-sixth centuries and put efforts to continue and expand trade in amber, which was impacted by the processes of the Great Migration period. The inflow of amber to the Roman Empire in the fourth century was very significant though less than before (Wielowiejski, 1980 a, p. 14-21; Kolendo, 1990, p. 91-100). Jordanes, a Gothic historian, retelling *Historica Gotica* by Cassiodorus, mentions the Baltic peoples as involved in the processes of the Great Migration in Europe together with the Goths (Wolfram, 1990, p. 139-140). Therefore, based on references in written sources, conclusion can be drawn, that the Baltic peoples were present in culturally defined world of the period. Yet it should be noted, that besides the western Baits, other tribes, like Celts, Goths, and the peoples of Dębczyn, Wielbark, Przeworsk, and Bogaczew cultures, later Olsztyn cultural group, were also involved in amber trade.

The lower Vistula region, Samland and the coast of Lithuania abounded in drift amber (Katinas, 1983, p. 10-11; Sidrys, 1994 a, fig. 1). The island of **Fiun** and western coast of the Jutland peninsula yielded raw amber to amber exporters in certain periods (Jensen, 1965, Karten 1-3, Kolendo, 1985, p. 11; Katinas, 1983, p. 11). Northwestern Poland, the basin of the

Narew river, the Mazurian Lakeland region, Pomerania not far away from Słupsk, also the environs of Gdańsk were rich in mined amber (Kosmowska-Ceranowicz., Pietrzak, 1985, p. 49-51, fig. 18).

In the middle of the first millennium (periods C3/D-E), the Baltic peoples saw big changes in their social-economic life, mostly related to the processes of the Great Migration period in Europe. All of the Baltic tribes later mentioned in the written sources emerged during the late fourth and fifth centuries (Tautavičius, 1996, p. 44-45, fig. 1). In the middle of the first millennium, the changing population numbers transformed the network of settlements and domestic intertribal trade routes in existing ethnic-cultural areas. The late fourth century brought to the Baltic peoples the first effects of the Great Migration period, yet only the fifth century saw a multifarious and more obvious effect on material culture of the Baltic peoples. Considerably bigger numbers of amber artifacts occurring in the burials of the Baltic peoples dated by the fifth and sixth centuries are related with the migration processes in the Barbaricum and interior migration of the Baltic peoples.

Historiography

Trade in amber and trade routes of different periods have been discussed in detail by a number of well known authors Jerzy and Premyslaw Wielowiejski, Marija Gimbutas, Mykolas Michelbertas (Wielowiejski, 1980; Wielowiejski, 1990, p. 101-133; 1997, p. 217-342; Michelbertas 1972, p. 65-72; Gimbutas, 1963, p. 144, 146; Gimbutienė, 1985, p. 56-59). Researchers who focus on intertribal trade aspects, view it as a wide cross-regional phenomenon. The Baltic peoples traded amber for **salt** and non-ferrous metals; for them it was also a way to obtain prestige goods. Trade in amber made them a part of historical processes of the period, as, besides goods, fresh cultural ideas traveled along the same routes. Amber trade was a factor that stimulated trade relationships among the peoples living in the Baltic region.

Laima Vaitkunskienė has explored the role amber played in religious beliefs and burial rituals of the Baltic tribes of Lithuania (Vaitkunskienė, 1992 a, p. 36-49; 1992 b, p. 49-57). Algirdas Varnas has researched Lithuanian amber artifacts dated to the ninth-twelfth centuries (Varnas, 1978, p. 117-124). The role of amber in religious beliefs and burial rites of the Baltic peoples, its economic significance, the sites of amber finds and tribal differences in application are the aspects, covered by Raymond Vytenis Sidrys' studies, for

which he has applied a nonparametric statistical method (Sidrys, 1994 a-b). Both L. Vaitkunskienė and R. Sidrys arrive to the conclusion, that amber for the Baltic peoples was a rare and expensive material, while rituals and prohibitions restricted its everyday application. The spread and role of amber in the Roman Iron Age, over the Migration Period and in the Middle Iron Age, have also been investigated in the works by Mykolas Michelbertas and Adolfas Tautavičius (Michelbertas, 1986, p. 105-106; Tautavičius, 1996, 186-188).

Characteristics of amber artifacts from the middle of the first millennium

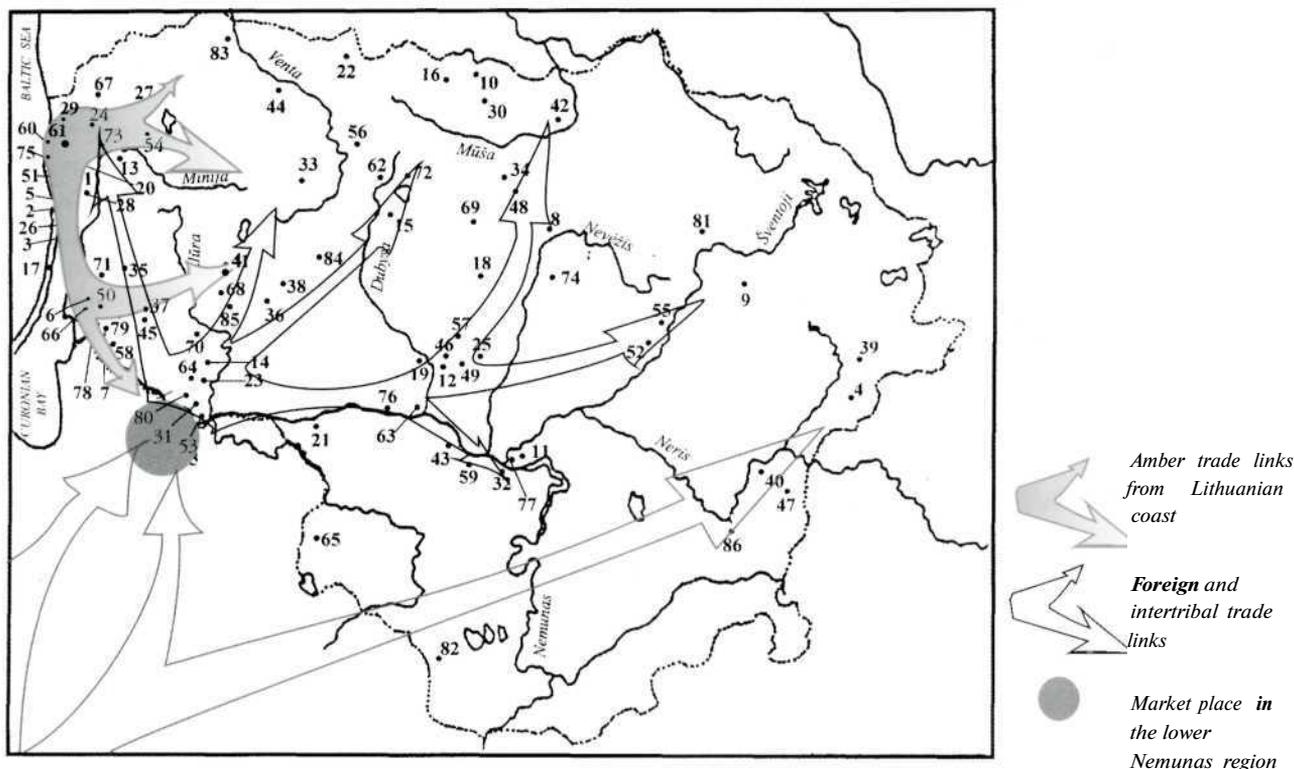
Amber beads and beads-pendants are the most important amber artifacts found in Lithuania and dated to the middle of the first millennium. One distinctive feature of the burials from this period is that besides amber beads they abound in raw amber. Over the Roman Iron Age, the Baltic peoples of Lithuania started wearing amber **beads** in the period B2/C1-C1b. Based on 1986 data, over a hundred of amber beads dated to the Roman Iron Age have been found at thirteen burial sites in western Lithuania, the lower Nemunas region and central Lithuania (Michelbertas, 1986, p. 106). More necklaces of amber and other beads have been recently found in the burials of the Roman period at the **Dauglaukis**, Baitai, Marvele, Pleškučiai-Pangėšai, Pajuostė, Pakalniai and other cemeteries. But this recent data do not alter previously established tendencies of placing amber into graves in the Roman Iron Age. Over the Roman Iron Age, amber beads were scarce. At that time, a few amber beads would be strung together with monochrome, colourful, multicolour and gilt beads of glass, enamel or bronze. Traditional Roman Iron Age shapes for amber beads were flattened spherical or truncated biconical; semi-circular and low tubular amber beads were typical of the end of the period.

Recent research done to identify spread of amber artifacts in **Lithuania** justifies a conclusion that the Middle Iron Age, in contrast to the Roman Iron Age, was much richer in amber artifacts (Sidrys, 1994 a, p. 85-86, fig. 8). But this comparison of intensity levels in application of amber artifacts in Lithuania was drawn based on chronological Iron Age periods traditionally distinguished in Lithuania: the Roman Iron Age (1-400), the Middle Iron Age (400-800) and the Late Iron Age (800-1200). Therefore, the concluded marked increase in amber artifacts usage in the Middle

Iron Age (400-800) is not correct. Indeed, the number of amber artifacts found in Lithuania starts increasing in the burials dated to the late fourth century. It should also be noted that most of amber artifacts are being found in the graves from the fifth and sixth centuries. By that time amber artifacts-amber beads are already spread across all the territory of Lithuania, as pointed out by the archaeologists M. Michelbertas and A. Tautavičius (map 1; Michelbertas, 1968, p. 87; 1986, p. 106; Tautavičius, 1996, p. 186-189). Amber artifacts from the fifth and sixth centuries are not only most numerous, but also come in diverse shapes of beads, beads-pendants, amber spindles and raw amber (fig. 1-13). Statistical data also evidences a marked increase in amber usage based on the finds from the fifth-sixth centuries (map 1). According to the data from the year 2000, of 215 number of burial sites attributed to this period, 86 were found to contain amber ornaments (map 1).

A marked increase in amber ornaments is observed in the burials from the late Roman Iron Age (C2 mostly C3 periods) and the Migration Period. This phenomenon was noticed and beads of the same shapes were found in Wielbark culture, and in a large area inhabited by the western Baltic peoples, as well as in Denmark, southern Sweden, and on the islands of Oland, Bornholm and Gotland (Stjernquist., Beck., Bergström, 1994; Kulakov, 1997, p. 115-117; Bursche., Ókulicz-Kozaryn, 1999, p. 141-154). It was a region at that time closely connected by political, trade and cultural ties.

Shorter and longer bead necklaces of different kinds are found in female and adolescent graves of the period. Bead necklaces are found placed on the chest of a buried person, often they appear to have been fixed to other ornaments, like brooches and pins. Single beads-amulets are typically found in male graves. Short amber bead strings are rare in male graves (Plinkaigalis, grave 54, 246; Vidgiriai, grave 14; Zviliai, grave 261). Interestingly, amber beads from the fifth and sixth centuries are frequently found in the graves of children and teenagers, especially so of young girls. Such a habit is especially pronounced at coastal **cemeteries** of western Lithuania and accounted for the fact that amber beads of less sophisticated forms and beads-pendants were local and thus less valuable produce. A general tendency of amber artifacts being most numerous in the graves of children and teenagers has several reasons. One of the key reasons is that of all burial sites of medieval Europe, not excepting Lithuanian, children's (young child, 1-7 years old) and adolescents' (7-15 years old) graves make up over a half of all the buried (Česnys.,



Mapl. Lithuanian amber trade links in the middle of the first millennium

Lithuanian burial grounds of the end of the 4th — 6th c. with amber artifacts

1 - Anduliai (Zeipen-Gerge, Stranz-Schlaudern, F.ghin-Niklau), Kretinga d.; 2 - **Aukštkiemiai** (Oberhof), Klaipėda d.; 3 - Baitai (Baiten, Baičiai), Klaipėda d.; 4 - Baliuliai, Švenčionys d.; 5 - Bandužiai, Klaipėda city; 6 - Barvai (Barven), Šilutė d.; 7 - Barzūnai, Šilutė d.; 8 - Berčiūnai, Panevėžys d.; 9 - Diktarai, Anykščiai d.; 10 - **Diržiai**, Pakruojis d.; 11 - **Eiguliai**, Kaunas city; 12 - **Geluva**, Raseiniai d.; 13 - Gintarai, Kretinga d.; 14 - Greižėnai (Greyszönen), Tauragė d.; 15 - Jakštaičiai — Meškiai, Šiauliai d.; 16 - **Jauneikiai**, Joniškis d.; 17 - Juodkrantė, Neringa city; 18 - Kairėnėliai, Radviliškis c); 19 - Kalniškiai (Bažavale), Raseiniai d.; 20 - Kalno Griekštai, Kretinga d.; 21 - Kiduliai, Šakiai d.; 22 - Kyviliai, Akmenė d.; 23 - Kreivėnai, Tauragė d.; 24 - Kurmaičiai-Pajuodupiai, Kretinga d.; 25 - Labūnava, Kėdainiai d.; 26 - Laistai (Leisten), Klaipėda d.; 27 - "Laiviai, Kretinga d.; 28 - Laukžemiai (? Dautzin-Niclau), Klaipėda d.; 29 - Lazdininkai, Kretinga d.; 30 - Lieporiai, Joniškis d.; 31 - Lumpėnai (Lumpöhnen), Šilutė d.; 32 - Marvelė, Kaunas city; 33 - Maudžiorai, Kelmė d.; 34 - Meldinai, Pakruojis d.; 35 - Mockaičiai, Klaipėda d.; 36 - Naujasis Obelynas, Šilalė d.; 37 - Nikėlai, Šilutė d.; 38 - Pagrybis, Šilalė d.; 39 - **Pavajuonys** - Rėkučiai, Ignalina d.; 40 - Pakalniai, Vilnius d.; 41 - Pakalniškiai, Šilalė d.; 42 - Pamiškiai, Pasvalys d.; 43 - Pavilkijis, Šakiai d.; 44 - Paventė, Mažeikiai d.; 45 - Paulaičiai, Šilutė d.; 46 - Pernarava, Kėdainiai d.; 47 - Pilviškės, Vilnius d.; 48 - Plauciškiai, Pakruojis d.; 49 - Plinkaigalis, Kėdainiai d.; 50 - "Pociai, Šilutė d.; 51 - Prysmančiai II, Kretinga d.; 52 - Obeliai, Ukmergė d.; 53 - Rambynas, Šilutė d.; 54 - Reketė, Kretinga d.; 55 - Riklikai, Anykščiai d.; 56 - *Ringuvėnai, Šiauliai d.; 57 - "Rinkšeliai, Raseiniai d.; 58 - Rubokai (Rubocken), Šilutė d.; 59 - Rupunionys, Kaunas d.; 60 - Rudaičiai L Kretinga d.; 61 - **Sakuočiai**, Kretinga d.; 62 - Sauginiai, Šiauliai d.; 63 - Serežius, Jurbarkas d.; 64 - Sodėnai, Šilutė d.; 65 - Stanaičiai, Vilkaviškis d.; 66 - **Stragnai (Skören)**, Klaipėda d.; 67 - Sūdėnai, Kretinga d.; 68 - Šarkai, Šilalė d.; 69 - Šašiai, Radviliškis d.; 70 - Šaukėnai, Tauragė d.; 71 - Šernai (Schemen), Klaipėda d.; 72 - Šiauliai II, Šiauliai city. Vaisių str.; 73 - Tūbausiai, Kretinga d.; 74 - Upytė, Panevėžys d.; 75 - Užpelkiai, Kretinga d.; 76 - Veliuona, Jurbarkas d.; 77 - Veršvai, Kaunas city; 78 - Vėžaičiai, Šilutė d.; 79 - Vilkyčiai (Wilkieten), Šilutė d.; 80 - Vidgiriai, Šilutė d.; 81 - Visėtiškės, Anykščiai d.; 82 - Zapsė, Alytus d.; 83 - **Zastaučiai**, Mažeikiai d.; 84 - **Žaduvėnai**, Telšiai d.; 85 - Žviliai, Šilalė d.; 86 - Žvirbliai, Vilnius d.

* Only a few graves and stray finds are dated to the 5th c

* Burialground is not excavated. Loose finds are dated to the **different** time periods and to the end of 4th - the 6th c

Balčiūnienė, 1988, p. 67-69; Stoodley, 2000, p. 456-472). Infant mortality was especially high, and being of a low status within society, infants were buried without any funerary goods. With age, the attitude to the children changed, and the older the child, the more grave goods she or he had in the grave (Stoodley, 2000, p. 456-472). Usually, shorter and longer necklaces are found in children's graves (Stoodley, 2000, fig. 1-2). Such a habit is noticed in a large part of Europe. High children mortality encouraged a search for methods that would increase children's chances to survive. Having in mind the fact, that since the Greek and Roman times, amber was believed to have curative qualities, it is not surprising at all, that it was expected to protect children from illnesses and an *evil eye*. On the other hand, amber was easily available in Lithuania, and simple hand-made bead strings were nothing luxurious (fig.1:1-3,5). Small 3-7-11 bead necklaces tied up to one or two crook-shaped iron pins have been found in adolescent and children's graves from the fifth-sixth centuries in Lithuania (Bandužiai, grave 83, Kalniškiai, graves 150, 229; Lazdininkai (excavations of 1940), grave 70; Rudaičiai I, graves 40, 43; Stragnai (excavations of 1985), grave 22; Sūdėnai, barrow 3, grave 8, barrow 1, grave 6; Sauginiai, graves 8, 14, 30; Tūbausiai, grave 22, 42; Užpelkiai, graves 15, 22, 29, 32, 92, 94).

In contrast from previous centuries, the fifth and sixth centuries saw Lithuanian women from the Baltic tribes wear long necklaces strung exclusively of lathed, semi-lathed or hand made amber beads, mixed necklaces of amber, glass and bronze beads also stayed on fashion (colour fig. 11-13). Such habit is manifested by the finds from the cemeteries of the lower Nemunas region and central Lithuania, which experienced import of amber artifacts (fig. 2). The long strings of lathed and semi-lathed amber beads appear in rich equipped women's graves. Amber necklaces were made of 10-16-18-21-24-29-39-43-53-72 beads (Kalniškiai, graves 35, 118, 191, 217; Marvelė, graves, 294, 305; Plinkaigalis, graves 9, 16, 29, 30, 34, 43, 51, 56, 67, 84, 98, 120, 125, 129, 130, 169, 215, 325, 346, 364 and cremated grave A; Vidgiriai, graves 21, 34; Lazdininkai (study of 1940), grave 70; (study of 1998), graves 32, 37, 38; Užpelkiai, graves 44, 92, 94). Only Lazdininkai and Užpelkiai are in the Baltic sea coast region.

Necklaces of 3-15 amber beads, bronze spirals, links of a chain, sometimes from one to five or up to 17-22 amber beads of amber, green glass, enamel, pewter or even clay have been found in the graves of children, teenagers and women buried in the late fourth

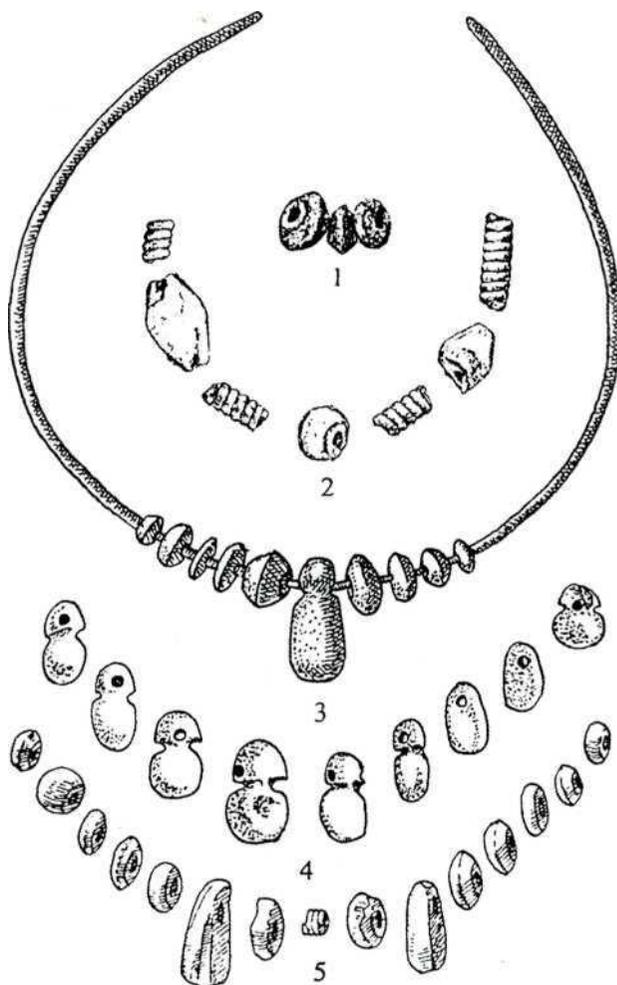
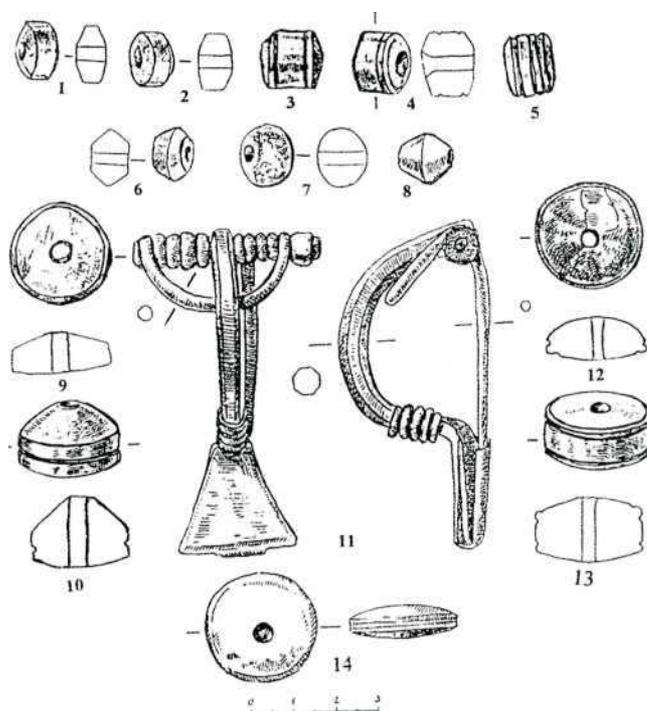


Fig. 1. Strings of amber beads, beads pendants and bronze spirals
 1- Užpelkiai, grave 62; 2- Užpelkiai, grave 77; 3- Užpelkiai, grave 43; 4- Zviliai, grave 261; 5- Bandužiai, grave 84.



*Fig. 2. Amber beads and crossbow bronze fibula
from Marvelė cemetery*

*1- grave 281; 2- grave 284; 3- grave 336;
4- grave 409; 5- grave 304; 6, 8- grave 2JJ;
7- grave 284; 9- grave 323; 10- grave 295;
11-12- grave 239; 13- grave 335; 14- grave 532*

through the sixth centuries in the rest of Lithuania.

The longest necklaces dated to the fifth-sixth centuries and most of single beads have been found not on the coast of Lithuania, but in the lower Nemunas (Vidgiriai) region, in central Lithuania (Kalniškiai, Marvelė, Plinkaigalis) and even eastern Lithuania (Baliuliai). Most probably the longest bead necklace dated to the fifth century strung of 232 amber, glass and enamel beads, was found in 2000, in eastern Lithuania at the Baliuliai barrow cemetery, barrow 12, inhumation grave 1. Over 171 shapes of amber beads (irregular oblong, flattened spherical, irregular cylindrical and square) were put together to make this necklace.¹

The bead necklaces from the fifth-sixth centuries found in the coastal part are strung of fewer beads, only 7-10-20. These are mostly traditional small truncated biconical or flattened spherical beads, though in some of such strings small cylindrical beads also turn up (fig. 1:3,5; 2: 6-8; 3: 5-7).

As regards Basonia type beads, the fewest of them have been found in the fifth-sixth century graves in western and central Lithuania (fig. 2: 9-10, 12-14; Sidrys, 1994 b, p. 40, fig. 10). However, coastal part of Lithuania is exceptionally rich in lathed step-cut beads (432 types according to Tempelmann-Maczyńska, 1985). Twenty-six lathed step-cut amber

beads of different shapes have been found in the Užpeliai burial site (fig. 3: 3; 4; 5). The lathed step cut beads are known from the third - early fourth centuries Wielbark culture (Bursche., Okulicz-Kozaryn, 1999, fig. 4, 6:1). Lathed step-cut beads have been found at Suwałki barrow cemetery and other Jotvingian burial sites of the end of the fourth-beginning of the fifth centuries (Antoniewicz, 1961, p.21-22, tab. 11:12).

One or two amber beads-pendants have been found strung together with amber beads in necklaces for the juvenile, buried in the fifth-sixth centuries (fig. 1: 3-5). The beads-pendants found in the burial sites in coastal, north-western, central and even southern and eastern parts of Lithuania come in different shapes (fig. 6: 1-44). Yet, the most popular were figure-eight beads-pendants, spread across Lithuania in period C3 (fig. 6: 1-19, 25-26; Banytė, 1995, p. 5-15, fig. 1-7; Banyte-Rowell, 2000, p. 29-40, fig. 2-5). Most of figure-eight beads-pendants have been found in the graves from the fourth - early fifth and the first half of the fifth century (Valatka, 1984, p. 17-19, fig. 12:15). However, the

The material of the year 2000 explorations of this barrow cemetery is yet unpublished. My acknowledgments go to the archaeologist Vida Kliaugaitė from the Department of the Cultural Heritage Protection for providing me with an opportunity to use this material.

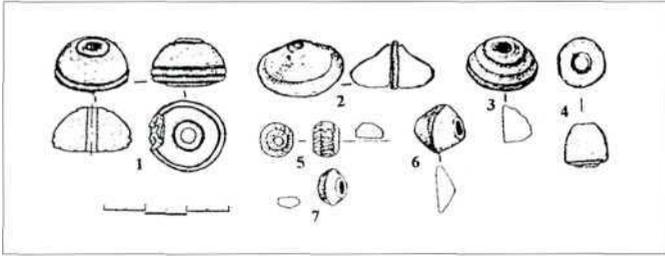


Fig. 3. Amber beads from Užpelkiai cemetery
1,4- MUM GEK 55 195, 63 244;3,
5-7-I.DM Dep.7178-7181; 2-grave 31

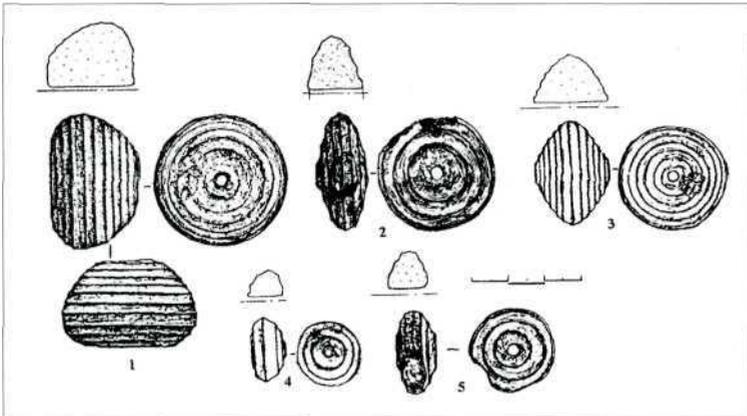


Fig. 4. Step cuts amber beads from Užpelkiai cemetery
1- MUM GEK 63 236; 2 - MUM GEK 55 166;
3- MUM GEK 63 250; 4 - M EI M GEK55039;
5-MUM GEK 63 237.

necklaces made exclusively of beads-pendants are very rare. Such rare necklace strung of seven figure-eight bead-pendants and two rectangular bead-pendants has been found in boy's grave 261 at the Zviliai cemetery and in Plinkaigalis female grave 313 (fig. 1:4; 7: 2; colour fig. 12).

Different types of necklaces and beads may indicate different trade routes, not necessarily related with Lithuanian coast (map 1). Amber artifacts found in the burials of the lower Nemunas region, central or eastern Lithuania could be not only local imports of coast Lithuania, but also more distant imports of **Samland**, the Gdansk bay, Mazurian Lakeland, Kuyavia region or south-western Poland, as these areas are known to have had amber beads of identical shapes, and also amber bead workshops, hoards and storage houses.

Position of amber artifacts in the graves

A custom of attaching a big lathed amber bead to a handle of a battle knife-dagger spread in the middle of the fifth and sixth centuries (Šimėnas, 1996, p. 27-71). Such graves are known in the cemeteries of Kalniškiai (grave 214), Lieporiai (grave 59), Marvelė (grave 323), Plinkaigalis (graves 106, 228); Vidginai (graves 13, 18, 37). To attach amber or some other material bead to their battle knife-dagger was also a

Scandinavian and Hunnish custom. In Sweden during the Iron Age, amber beads were sometimes attached to swords (Stjernquist., Beck., Bergström, 1994, p. 38-39). The Huns would fix a bead-amulet of glass, semi-precious stones or amber to a handle of the sword (Csallány, 1961, p. 259-260; Bona, 1993, fig. 22: 2-3; 47, 51, 53, 56; 61; plate XVI). It should be noted that some lathed amber beads found in the Baltic lands in

Fig. 5. Step cut amber bead from Užpelkiai
Stray find, MUM GEL 63237
(Photo by Antanas Luksėnas)



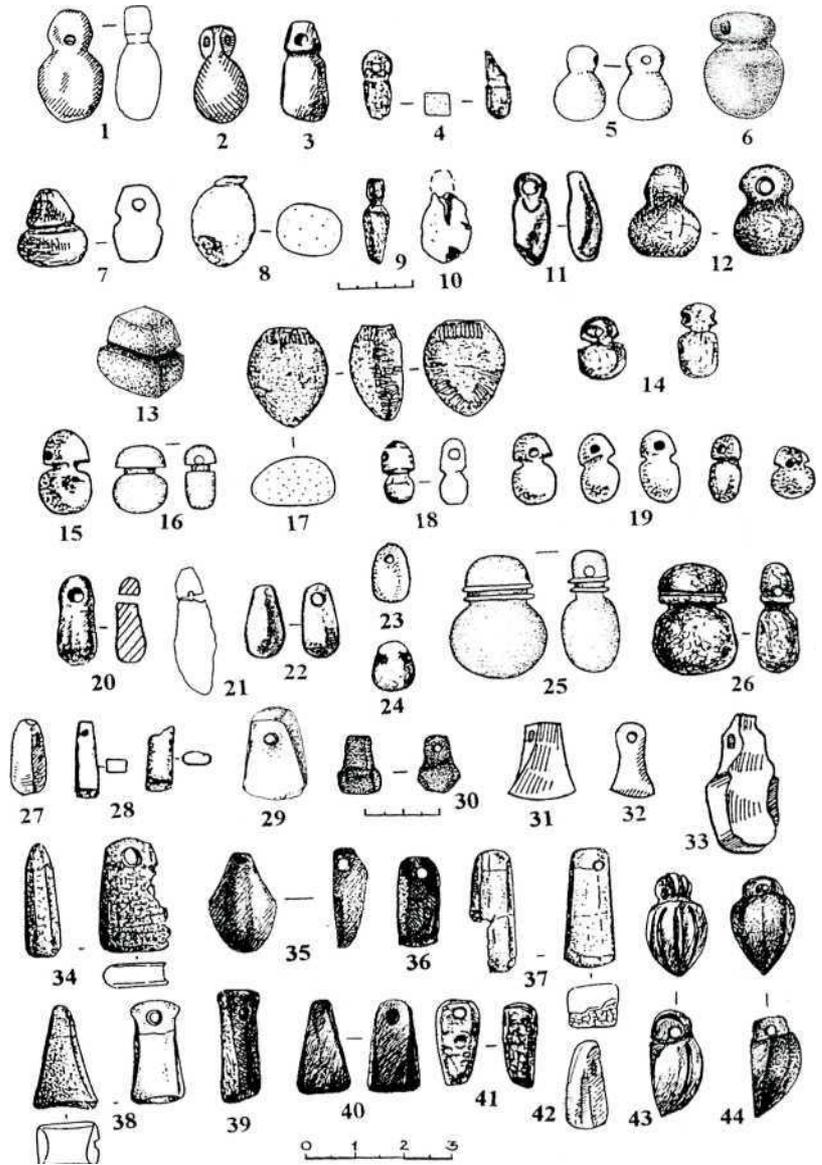


Fig. 6. Amber beads-pendants

1- Gintarai, LNMAR 651: 17; 2- Maudžiorai, grave 69; 3- Užpelkiai, grave 43; 4- Užpelkiai, MUMGEK 63 260; 5- according to Tempelmann - Maczyńska, 1985, Tafel 18: 465; 6- Užpelkiai, LD MED U 6940; 7- Pavajuonys - Rėkučiai, barrow cemetery, barrow 11, grave 7; 8- Užpelkiai, MUMGEK 63 262; 9- Barzūnai, grave 7; 10- Užpelkiai, LDM PGa 10: 102; 11- Sūdenai, loose find, KrM; 12- Stragnai, LNMAR 38: 2421; 13- Užpelkiai, LDM PG a 11: 34; 14, 24- Plinkaigalis, grave 313; 15, 19, 23- Žviliai, grave 261; 16- according to Tempelmann - Maczyńska, 1985, Tafel 18: 471 d; 17- Užpelkiai, MUMGEK 62 269; 18- Zapsė, grave 7; 20- Lazdininkai, KrM; 21- Užpelkiai, LDM PGa 11: 33; 22- Sūdenai, loose find, KrM; 25- according to Tempelmann - Maczyńska, 1985, Tafel 18: 471 e; 26- Baitai, grave 2; 27, 42- Bandužiai, grave 84; 28- Palanga, grave -11; 29- Semai, grave 65; 30- Pleškučiai, loose find; 31-32- Maudžiorai, grave 32; 33- Maudžiorai, grave 36; 34- Stragnai, LNMAR 38: 1722; 35- Baitai, grave 22; 36, 39- Baitai, grave 5; 37- Stragnai, LNMAR 38: 1723; 38- Stragnai, LNMAR 38: 1724; 40- Baitai, grave 31; 41- Užpelkiai, LDM Dep. 7177; 43- 44- Baitai, grave 4.

their form mirror the Hunnish ones (Bona, 1993, fig. 22:2). Large amber beads would also be attached to a belt or a sash, as manifested by the finds of male graves at the burial sites of Kalniškiai and Užpelkiai (fig. 3:2). The custom to fix a big bead-pendant, not necessarily an amber one, to the belt or sash was part of Danubian Sarmats and German's costume of the rich persons. Evidently during the early Migration period, such custom was popular within a large area from the Caucasus up to the Rhein under the influence of prestigious Mediterranean fashion. In the fifth-sixth centuries, an amber bead was sometimes attached to a spear (Vidgiriai, grave 9).

Amber beads found singly in the graves from the fifth-sixth centuries happen to be placed not only on the chest, where they were attached to a necklace, **brooch**, pin, sown to dress or strung on a piece of rope and hanging on a chest. Some singly found amber beads are placed next to the head (Lieporiai, grave 65, Marvelė, grave 335; Plinkaigalis, grave 21, 46, 97), some are placed next to the bracelets (Zviliai, grave 149) or in the area of the waist and pelvis. This position of amber beads relates not only to the male custom to attach a bead to their battle knife-dagger's handle; women seem to have had a custom to fix an amber bead, a *piece* of raw amber or even a spindle to a sash, mostly on the left side. This means that amber beads were used not only in neck ornaments. Therefore singly found amber beads should be considered amber-amulets.

In the context of Lithuanian amber artifacts from the fifth-sixth centuries, the finds from the Vidgiriai cemetery in the lower reaches of the Nemunas evidence a distinct amber necklace wear style (map 1). Besides Baltic elements, the burial rites and accompanying material have analogues in central Europe, the Danube and the lower Vistula regions, Scandinavia and the Baltic Sea coast (Šimėnas, 1996, p. 6). Iron prolong-headed pins have been found in female graves at the Vidgiriai cemetery (graves 11, 16, 17, 41). Such pins have been found next to the head, they were used to fix a headband. From five to nine small lathed amber beads were attached to these pins. Besides, in grave 11, one amber bead was attached to a brooch, while 12 more beads on the left side were tied up to a sash. Beads fixed to iron pins were also found in grave 16, besides, seven amber beads were found by the left, and 20 of them-by the right hand of the buried person. In female grave 19, ten lathed beads of Basonia type were strung into a necklace; five other beads were fixed to a headband. From five to twelve amber beads

attached to sashes on the left and the right side were found in the Vidgiriai cemetery (graves 11, 14, 16, 17, 19, 34; grave 14 is male).

Alongside with other tools placed next to the buried person's head, amber spindles of cylindrical form have also been found at the Lithuanian cemeteries dated to the fifth-sixth centuries (fig. 8). Most of such are the finds from the Lazdininkai cemetery (excavations of 1949, graves 16, 46, 63, 65, 67, excavations of 1998, graves 37; fig. 7: 1,3). Some single amber spindles have been found in the lower Nemunas region, (Vidgiriai, grave 72) at the Samogitian cemeteries (Pagrybis, grave 33, stray finds; fig. 8:2, 4). The graves dated to the fifth and sixth centuries are found to contain raw amber. Raw amber pieces happen to be in different locations in the grave: near the head (Lieporiai, grave 77, Užpelkiai, grave 94) on the chest (Lazdininkai, excavations in 1940, grave 39, Pagrybis, male grave 134) in the area of pelvis (Maudžioriai, female grave 175, Užpelkiai, male graves 16, 66, female grave 84). Raw amber material found at the Lieporiai cemetery, male grave 6, was located next to the chin. A noteworthy piece of natural raw amber was found in female grave 84 at the Užpelkiai cemetery. It had a natural cavity in it, and through that opening it was tied up to a sash in a fashion of amulet (fig. 10). This Užpelkiai find relates amber pendant-amulets with apotropaistic bronze pendants of the seventh-ninth centuries, numerous in the graves of the period in western Lithuania and the lower reaches of the Nemunas (Bliujienė, 1995, p. 39-72; 1998, p. 66-87).

Occasionally, an amber bead or a piece of raw amber is found near the head or in the mouth in Sweden and Denmark (Stjernquist., Beck., Bergström, 1994, p. 39). Single amber beads, raw amber pieces placed next to the head or into the mouth are sometimes interpreted as a tribute to the death good Charon, this way amber assumes function of money (Stjernquist., Beck., Bergström, 1994, p. 38-39). Other accounts of this phenomenon are also possible, but there is no doubt in the importance vested in amber by the tribe members at the burial of the deceased. Therefore position of single amber beads and raw amber in the graves of the fifth-sixth centuries, besides indicating ties with the heathen religion, reveals a belief in the magic power of amber. However, we should keep in mind that raw amber pieces could have served a practical purpose, like indicating that a buried individual was amber craftsman (Okulicz, 1973, p. 455; Bliujienė, 1998, p. 286).

Among the finds from the seventh century onwards, amber beads and especially amber necklaces become

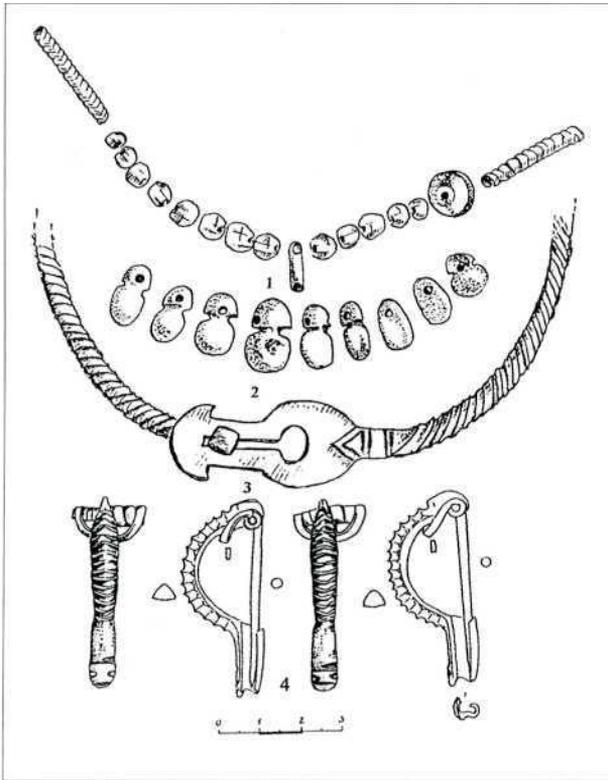


Fig. 7. Grave goods from Zviliai, grave 261

scarce, of these, single amber beads, considered by archaeologists to be amulets, dominate. The Samogitians and **Semigallians** would attach single (one or two) amber beads to their brooches (men), pins (women) or directly to dress. Over the entire second half of the first millennium and the beginning of the second millennium, small necklaces of bronze spirals, pendants and several glass, occasionally amber, beads were the only neck ornament used by females of the Lithuanian Baltic tribes. This can be partially related with cremation rites. In Lithuania, occurrence of amber beads in cremations versus inhumation has not yet been consistently researched.

Lithuanian trade links in the middle of the first millennium

Amber beads of several types, like hand made, semi-lathed (on a device resembling a bow) and lathed ones, are found in a large part of **Barbaricum** of the period under discussion (Zak, 1962; Mączyńska, 1972, p. 349-390; **Tempelmann-Mączyńska**, 1985). Production of half-lathed and lathed beads is related

with the spread of the kick-wheel (potter's wheel). In most cases, semi-lathed amber beads imitate shapes of lathed ones. Only the peoples, which at the time used potter's wheel in pottery, could also produce lathed beads (Żak, 1962, p. 182-186). Thrown on the wheel pottery appeared in the region of the amber route and its branches only in the end of the second century; by the fourth century, throwing was introduced into pottery locally (Żak, 1962, p. 186-188; Wielowiejski, 1980 b). Amber turning lathe and potter's wheel could have been brought to these quarters by Gothic merchants from amber processing workshops in Aquileia and Pannonia. In **Samland** peninsula in the fifth century, potter's wheel was used occasionally (Okulicz, 1973, p. 441).

West Baits saw the first lathed and semi-lathed amber beads in the period B2/C3, production of such beads started spreading there only at the turn of the periods C3-D (Okulicz, 1973, p. 439, 454-455, fig. 217: c, 218 j, 224; Wielowiejski, 1976, p. 98). However, production of lathed amber beads was indeed established in the Baltic lands only in period D. Lithuania was reached by the first imports of lathed beads in the middle of the second half of the third century together with Roman coins, glass and enamel beads (Lazdininkai, grave 13 (research of 1992), Dauglaukis, grave 1, LNM AR 366:1).

As it is known, from the fifth through the ninth century, modelling was the only method used in Lithuania for making pottery (Tautavičius, 1996, p. 264-270). In the tenth-eleventh centuries potters of the Baltic tribes started combining modelling with throwing, thrown pottery was introduced in the tenth century (**Zulkus**, Klimka, 1989, p.46-53). This means that no proper technical equipment for turning amber beads existed in Lithuania in the fourth-sixth centuries. But this fact does not preclude a possibility that beads or beads-pendants were made by hand, or maybe on a bow-type turning device (for making semi-lathed beads).

A large amber beads production center was situated at the lower reaches of the Vistula, the seashore between the Vistula and the Oder and the Vistula -Parsęt (Gdańsk region and the area of Kołbrzeg-Słupsk). Lathed and semi-lathed amber beads typical of the late Roman Iron Age and the Migration period were produced in these quarters until the fifth century. Other possible regions of producing lathed and semi-lathed amber beads were basin of the rivers Narew-Vistula and southeastern part of Poland (Wielowiejski, 1997, p. 215-347; Gruszczyńska, 1999, p. 183-19; fig. 2: 1-5, 9-10, 12-14; 3: 1-4). Based on the occurrence of step-cut amber beads in the area, such beads over the period B2/C1 and C3/

D could have been produced somewhere between Gdańsk and the Nogat river, maybe in Mazurian Lakeland (fig. 4: 1-5; 5; colour fig. 1,13; Okulicz, 1973, p. 455; 1976, p. 181-213). 997 is the date when Gdańsk amber processing workshops first entered the written sources, however, amber processing in these quarters goes back to the Stone Age (Tabaczyńska, 1999, p. 177-180).

In the late fourth century and over the first half of the fifth, large amber processing workshops operated in Swilcza, Rzeszów voivodeship (southeastern Poland). Swilcza amber beads are very similar to the ones found in Lithuania (fig. 2: 1-4; colour fig. 11,13). Among the Swilcza amber beads (especially type IV according to P. Wielowiejski or type 440, according to M. I empelmann-Maczyńska) are similar to *Basonia* beads (Wielowiejski, 1990, p. 111). To classify these amber beads by type of production, the bulk of the Swilcza beads are hand-made, probably produced with the help of a knife and chisel. Only a couple of the amber beads show traces of having been turned on a lathe (Gruszczyńska, 1999, p. 185). Excavations have revealed that Swilcza amber workshops were deserted unexpectedly, and the end of their existence is related with the collapse of the Hunnish Empire in 455 (Gruszczyńska, 1999, p. 188).

Over the Iron Age and the Early Migration Period, quite sizeable amber workshops existed in Kuiavia

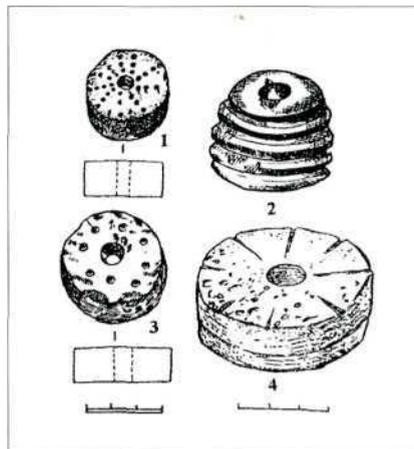


Fig. 8. Amber spindles

1, 3- *Lazdininkai*, grave 65 and 67; 2 - *Pakalniškiai*, LNMAR 567; 4 - *Pagrybis*, grave 33.

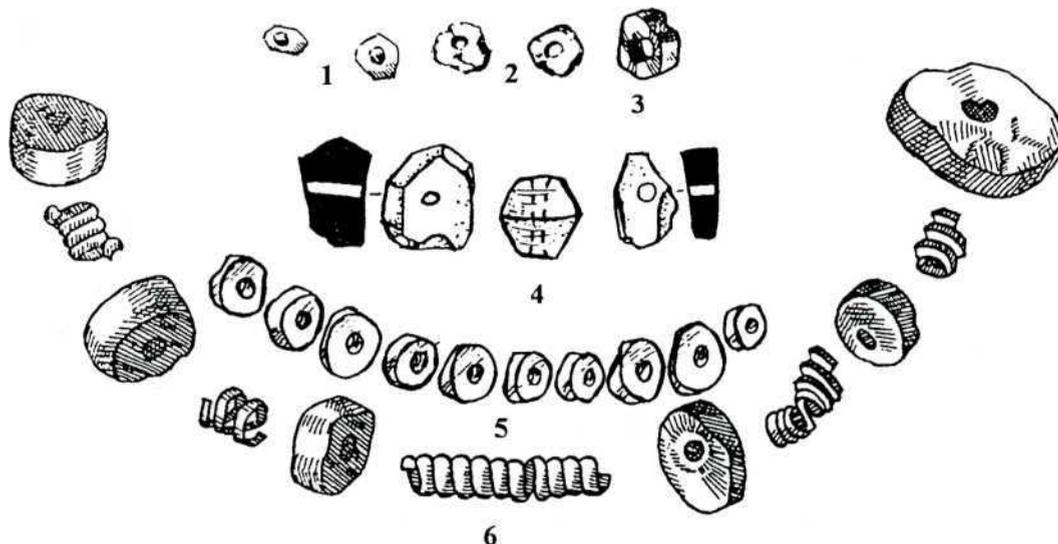


Fig. 9. Strings of amber beads and amber beads

1- *Berčiūnai* barrow cemetery, barrow 58, grave 1; 2- *Sašiai*, grave 5; 3 - *Jaiineikiai*, lose find; 4 *Cora Velikanov* (*Hunnenberg*, *Kaliningrad region*, *Russia*); 5 - *Kalniškiai*, grave 118; 6 - *Sauginiai*, grave 9.

region (central Poland). The products of these workshops are similar to the amber beads from the fifth-sixth centuries found in Lithuania. Kuiavia region was at the crossroad of transit routes between the Oder and the Vistula rivers and a spot of natural salt springs into the bargain. Thus Kuiavia was the target of long-distance amber trade, rather than a mere transit area. Inowrocław, Kruszą Zamkowa, Jacew, Parchanki, Gaški, Wróble, Konary, Kuczkw, also Benice, Radwanice amber workshops were operating in this region since period Bib. Most of these amber workshops existed until their collapse in the fifth century as the economic depression in Italy brought down all Central European market (Cofta-Broniewska, 1999, p. 151-175).

Amber processing workshops should have existed in Samland. Over A3/B3 period, Mazurian Lakeland was a large amber trade center (Nowakowski, 1997, p. 100). Completed and ready for wear amber beads, half-processed amber beads prepared for turning, shavings of amber, and, of course, raw amber is found on the sites of the former workshops. The analysis of amber samples indicates the Baltic Sea as its provenance. Infrared analysis of the amber from Swilcza has provided evidence of it being typical succinite (Gruszczyńska, 1999, p. 186). A part of the Baltic raw amber arrived to this huge region via the amber route to be processed and returned back in the form of lathed and semi-lathed amber beads and in the lot of cases with beads- pendants (fig. 6:7, 14-15, 18, 19, 23-24, 26; 7:2; colour fig. 11). The rest of the raw amber and the part of ready made amber beads were traded further to the south.

In the late Roman Iron Age and during the Migration Period, the current Polish portion of the amber route or other spots of active amber trade are found to have had not only amber processing workshops and hoards, but also warehouses to store raw amber and amber beads. Raw amber from these warehouses traveled further south. Amber beads were traded to the merchants coming from Barbaricum, including merchants from Lithuania. The merchant hoard found in Basonia near Lublin is the most famous. The hoard found was 300 kg of raw amber lumps and 30 kg of five types turned on lathe amber beads, dated to the first half of the fifth century (Wielowiejski, 1990, p. 101-133). Most amber beads of Basonia type are found in the huge region inhabited by the western Baits (Tempelmann-Mączynska, 1985, Abb.12, Tafel 68; Wielowiejski, 1990, p. 111-113). It should be assumed that these beads were produced

by the workshops located within the area of their occurrence. Basonia type beads are quite numerous at the high reaches of the Elbe and Wczer rivers: the beads were brought here by trade links. In Lithuania, some of Basonia type beads have been found in the graves at the cemeteries dated to the fifth-sixth century in the lower Nemunas region and central Lithuania; several of such beads came from the cemeteries in Samogitia and Eastern Lithuania. However in Lithuania the 1994 data listed only 16 find spots of such beads (Sidrys, 1994 b, p. 40, fig. 10).

The development of Samland culture and the culture of the lower Nemunas region would indicate that trade in amber could have been an element unifying both Baltic areas (Nowakowski, 1999, p. 110-118). In the periods D-EI the number of amber beads found at the Semba -Notanga cemeteries increases (Kulakov, 1997, p. 114-118; Šimėnas, 1999, p. 52 - 115). The beads found in cremations of this cultural group show rough work, they are simple hacked out beads without any burnish (fig. 9: 4) Similar amber beads have been found at the cemeteries of central Lithuania, especially big numbers of these have been found in recent years at Kalniškiai (graves 127, 133, 194) cemetery, some of them have been found at Marvelė cemetery (grave 294, 305) at Samogitian Sauginiai cemetery (grave 9), also in eastern Lithuania (Diktarai, grave 58; fig. 9: 1-3, 5-6). Yet such beads are not typical of coastal Lithuania.

It is quite possible that Lithuania traders in raw amber from Samland could reach Kuiavia, the environs of Rzeszów and other markets of central Europe, where, we should assume, west Baltic merchants used to buy amber beads and other goods manufactured in central Europe. Some indirect evidence of the Baits trading in raw amber comes from Tacitus, when he claims that amber was granted its value only by Roman desire for luxury (Tacitus, 1972, p. 29-30). The artifacts produced in Aquileia and Pannonia workshops from the ancient times (amber sculptures of gods, deities and Cupids, theater performers or heroes, small sculptures adorning brooches, vases and even necklaces of amber beads, or the amphitheatre decorated for Nero's gladiators) are based on completely different traditions (Catacchio, 1993, p. 191-211; Losi., Raposso., Ruggiero, 1993, p. 203-210; Lund Hansen, 1996, p. 106-107). Such artifacts never reached Lithuania.

This does not exclude a possibility of trips by Baltic merchants to the Roman Empire's provinces or even Rome itself, it is obvious, that raw amber merchants having purchased the goods they needed, like bronze, salt, lathed and semi-lathed amber beads, glass and

enamel beads, headed home. Besides lathed and half-lathed amber beads, other artifacts (brooches, bindings for drinking horns, belt buckles and their bindings), imports from the middle Danube, have been found at the Lithuanian cemeteries of the fifth-sixth centuries (Plinkaigalis, Kalniškiai, **Sauginiai**, Vidgiriai, Marvelė, Zviliai). Worth noting is a silver cicada-shaped brooch dated to the fifth-early sixth century — a stray find of Sauginiai (LNM AR 507:60; Merkevičius, 1984, p. 55, fig. 1 8:2). Another silver brooch with plates at its terminals, dated to the fifth-early sixth century has been found in male grave 144 of the Plinkaigalis cemetery. A large amber bead-amulet was attached to this brooch. The brooches, finds of Plinkaigalis and Sauginiai, are imports from the territory of present Hungary and represent characteristic Hunnish artifacts style (Kazakevičius, 1993, p.113-114). Only two "Raupenfibeln" type brooches from the fifth century are found in Lithuania. They also belong to the aforementioned boy's grave 261 at Zviliai (fig. 7: 4). Most of such brooches were found in the lower Vistula area, the Wielbark culture region and Samland (Tuszyńska, 1998, p. 177-187).

Cemeteries from the fifth-sixth centuries in western Lithuania, the lower Nemunas region and central Lithuania abound in imported items from these regions; numerous metal artifacts were made locally following imported models. The types of amber beads and other artifacts found in the graves from the fifth-sixth centuries could evidence an intensive long distance trade in raw amber between the merchants of the coastal area and southern regions. Besides other goods, coastal merchants brought back semi-lathed, lathed and roughly processed amber beads, which they traded to the local vendors at the markets in the lower Nemunas region. Abundant and diverse finds from the cemeteries also evidence a large trade center having existed in the region of the lower Nemunas and Jūra rivers (map 1; Michelbertas, 1989, p. 13-21, fig. 1-3; Žulkus., Klimka, 1989, fig. 27; Genys, 1997, fig. 1-3). Outside Tilset (Sovietsk, Kaliningrad region) and environs of Linkūnai (Linkuhnen; Slavsk d., Kaliningrad region) there seems to have been a convenient spot for crossing the river Nemunas from Samland into Lithuania (Nowakowski, 1997, p. 102; Zulkus., Klimka, 1989, p. 57). Off this trade center, the way must have forked. This was a crossroad for the merchants, who arrived from central Lithuania and other regions to the big market on the lower Nemunas: they would take a turn to central Lithuania and head

home bringing along the purchased amber beads and other goods. Those who would arrive from the coast, they only carried home the delicate lathed beads (fig. 3:1-4; 4-5). There was no need to import amber beads of poorer work into Lithuanian coastal regions because of locally produced hand-made and semi-lathed beads in truncated biconical, flattened spherical shapes and beads-pendants in different shapes. It is worth noting that local craftsmen of coastal Lithuania started imitating lathed truncated biconical beads. Coastal Lithuania also developed local varieties of beads-pendants shapes typical only of Lithuania (fig. 6: 1-4, 6, 8-13, 17, 20-22, 27-44). Locally made beads and



Fig. 10. Pendant of raw amber from Užpelkiai cemetery, grave 84

beads-pendants were meant for domestic trade. As last years datum shows Mazurian Lakeland by trade route should be connected with central, southern and eastern parts of Lithuania. The amber beads found at such multiethnic cemeteries like Vidgiriai should have been brought over by their owners.

Unfortunately, excavations of the hill-forts and settlements from the Iron Age failed to provide any evidence of amber processing in Lithuania. A few small lumps of raw amber and loose beads were found in several Lithuanian hill-forts (Eketė, Žarde, both in Klaipėda d., Imbare, Kretinga d., Mažulionys, Ignalina d.; Kaukai, Alytus d.; Narkūnai, Utena d.; Varnas, 1978, p. 124; Luchtanas, 1981, p. 14). It is assumed that at least in the ninth-twelfth centuries amber processing centers could exist at Palanga settlement (coastal Lithuania), somewhere in Kretinga and Šilutė regions (Varnas, 1978, p. 123; Zulkus, 1990, p. 41; 1997, p. 274-275, fig. 181-183, 184: 3).

A hoard of raw amber, several hand made beads and parts of pendants have been found at Palanga settlement

(Žulkus, 1990, p. 41; 1997, p. 274-275, 277, pav. 181-184: 3). This find indicates possibility of producing amber ornaments in Viking Age or perhaps in the twelve-thirteens centuries. However amber beads and pendants belonging to Curonian cemeteries of the Viking Age are crudely made by hand.

As strange as it is, a big amber processing center in the tenth-eleventh centuries existed in Daugmalė, in the lower Dauguva region (Radinš, 1992, p. 115-124) Daugmalė prototown on the Dauguva river is quite far away from the sea. The Riga gulf is not rich in drift amber resources (Sidrys, 1994 a, p 61, fig. 1). Most probably this amber processing center could exist due to intertribal trade, reliable trade routes and professional skills of the craftsmen, including traveling ones. These circumstances were more important than direct access to raw amber resources. It becomes obvious, that areas of high amber artifacts occurrence, resources of raw material and processing centers are not always collocated.

Translated by Irena Jomantiene

References

- Antonicwicz J. 1961 - Badania kurhanów z okresu rzymskiego dokonane w 1957 r. miejscowości Szwajcaria, pow. Suwałki. *Wiadomości Archeologiczne*. T. 27, p. 24-36.
- Banytė R. 1992-Baitų (Klaipėdos raj.) kapinyno tyrinėjimai 1990 ir 1991 m. *ATI. 1990 ir 1991 metais*. Vilnius, p. 70-73.
- Banytė R. 1995-Gintariniai kabučiai iš Baitų senkapių. *Vakarų baltų istorija ir kultūra*. T. 2. Klaipėda, p. 5-20.
- Banytė Rowell R. 2000-Characteristics of the end of the Roman Period according to material from Baitai grave site (near Klaipėda). *AB*. T. 4, Vilnius, p. 27-44.
- Bliujienė A. 1995—Apskriti kabučiai kuršių kultūroje Vili amžiaus pabaigoje - IX amžiuje. *Lituanistica*. 1995, Nr. 1 (21), p. 39-72.
- Bliujienė A. 1998—Lamatos moterų ovalūs kabučiai ir jų germaniškos paralelės. *Lituanistica*, 1998, Nr. 2 (34), p. 66-87.
- Bliujienė A. 1998- Investigation at the Užpelkiai Cemetery. *AB*. T. 3, Vilnius, p. 277 - 290.
- Bona I. 1993 -A hunok és nagykirályai. Budapest.
- Borsche A., Okulicz-Kozaryn J. 1999- Groby z monetami rzymskimi na cmentarzysku kultury wielbarskiej w Wekchach koło Elbląga. *Comhlnn*. Warszawa, 1999, p. 141-161.
- Catachio N. 1993- The Production of Amber **Figurines** in Italy from the 8th to the 4th centuries BC. *Amber in Archaeology. Proceedings of the Second International Conference on Amber in Archaeology Liblice 1990*. Praha, p. 191-211.
- Csallány D. 1961- Archäologische Denkmäler der **Gepiden** im Mitteldonaubecken (454-568 u. Z.), Budapest.
- Cofta-Broniewska A. 1999-Amber in the Material Culture of the Communities of the Region of Kuiavia During the Roman Period. *Investigations into Amber*. Gdansk, p. 157—175.
- Česnys G., Balčiūnienė I. 1988-Senujų Lietuvos gyventojų antropologija. Vilnius.
- Genys J. 1997-Trade routes and trade centres in Western Lithuania during the Middle Ages. *AB*. T. 2. Vilnius, p. 141-154.
- Gimbutas M. 1963 - The Baits. London.
- Gimbutienė M. 1985—Baltai priešistoriniais laikais. Vilnius.
- Gruszczyńska A. 1999—Amber-workers of the Fourth and Fifth Centuries AD from Swilcza Near Rzeszów. *Investigations into Amber*. Gdańsk, p. 183 - 190.
- Jensen J. 1965. Bernsteinfunde und Bernsteinhandel der jüngeren Bronzezeit—Dänemarks. *Acta Archaeologia XXXVI. Kobenhavn*, p. 43-83.
- Katinas V. 1983-Baltijos gintaras. Vilnius.
- Kazakevičius V. 1993- Plinkaigalio kapinynas. *LA*. T. 10. Vilnius,
- Kosmowska—Ceranowicz B., Pietrzak T. 1982—Znaleziska i dawne kopalnie bursztynu w Polsce. Warszawa.
- Kosmowska-Ceranowicz B., Pietrzak T. 1985-Z dziejów rozwoju wiedzy o znaleziskach **bursztynu** i ich prezentacji na mapach dawnych i współczesnych. *PMZ*, z. 37. Warszawa, p. 27-60.
- Kolendo J. 1985-Miejsca występowania bursztynu według Pliniusza Starszego. *PMZ*, z. 37. Warszawa, 1985, p. 5-26.
- Kolendo J. 1990—Napływ bursztynu z północy na tereny imperium rzymskiego w I-VI w. n. e. *PMZ*, z. 41, Warszawa, p. 91-100.
- Kulakov V. I. 1997- Istoki kultury prusov. *Vakari/ baltai: Etnogenezė ir etninė istorija*. Vilnius, p. 1 15-1 17.
- Loši M., Raposso B., Ruggiero G. 1993-The Production of Amber Female Heads in Pre-Roman Italy. *Amber in Archaeology. Proceedings of the Second International Conference on Amber in Archaeology Libnice 1990*. Praha, p. 203-21 1.
- LIS. 1955 -Lietuvos LSR istorijos šakiniai. T. 1. Vilnius.
- Luchtanas A. 1981 - Žalvario apdirbimas ankstyvuosiuose rytu Lietuvos piliakalniuose *LA*. T. 2. Vilnius, p. 5-17.
- Lund Hansen U. 1996— Trade contacts between Scandinavia and the Roman Empire in the first to fourth centuries A. D. *Roman Reflections in Scandinavia*. Roma, 101 — 107.
- Mać/yrńska M. 1972 — Uwagi o chronologi i rozprzestrzenianiu paciorków w okresie rzymskim i wczesnej flizie okresu wędrówek ludów w Polsce. *Archeologia Polski*. T XVII, z. 2, p. 349-389.
- Merkevičius A. 1984-Sauginių plokštinių kapinynas. *LA*. T. 3. Vilnius, p. 41-63.
- Michelbertas M. 1972—Prekybiniai ryšiai su Romos imperija. *Lietuvos gyventojų prekybiniai ryšiai I— XIII a*. Vilnius, p. 5— 125.
- Michelbertas M. 1986 — Senasis geležies amžius Lietuvoje. Vilnius.
- Michelbertas M. 1995- Romėnų didiko ekspedicija gintarui pargabenti ir radiniai Lietuvoje. *BA*. Nr. 2(5), p. 17-19.
- Michelbertas M. 1989-Vakarų Lietuvos apgyvendinimas senajame geležies amžiuje ir kai kurie šio regiono etninės istorijos

klausimai. *Vakarų baltų archeologija ir istorija*. Klaipėda, p. 13-21.

Nowakowski W. 1997—**Zemli** nad niżnim Nemanom i sambijskim **poluostrovom** v rimskuju epochu. *Vakarų baltai: etnogenėzė ir etninė istorija*. Vilnius, p. 99—105.

Nowakowski W. 1999—Das Problem der Chronologie der **spätromischen** Kaiserzeit und **Völkerwanderungszeit** im Memelgebiet hinsichtlich der Funde aus dem Gräberfeld Aukštakiemiai (Oberhof). *Archaeologia Lituana*. T. 1. Vilnius, p. 1 10—1 18.

Okulicz I. 1 973—Pradzieje ziem pruskich od późnego paleolitu do VII w. n. e. Wrocław, Warszawa, Kraków, (Sdańsk.

Okulicz I. 1976—**Powiązania** pobraża wshodniego Bałtyku i centrum sambijskiego z południem w podokresie wczesnorzymskim. *Zeszyty naukowe uniwersytetu Jagiellońskiego. Prace Archeologiczne*. Z. 22, Kraków, p. 181-213.

Radius J. 1992 — The **Daugmale** Antiquities **Complex**. *Contacts Across the Baltic Sea*. Lund, p. 1 15-124.

Sidrys R. 1994 a—**Vakarų baltų** gintaro **įkapės** geležies amžiuje. *Klaipėdos miesto ir regiono archeologijos ir istorijos problemos. Ada Historien Universitatis Klaipedensis. II*. Klaipėda, p. 59-106.

Sidrys R. 1994 b—**Gintaro** įkapės senojo ir vidurinio geležies amžiaus kapuose. *Vidurio Lietuvos archeologija*. Vilnius, p. 28-46.

Stankus J. 1995— **Bandužių** kapinynas. *LA*. T. 12. Vilnius.

Stjernquist B., Beck C. W., Bergström J. 1994 — Archaeological and Scientific Studies of Amber from the Swedish Iron Age. Lund.

Stoodley N. 2000—From the cradle to the grave: age organization and the early Anglo—Saxon burial rite. *World Archaeology*. Vol. 31 (3), p. 456-472,

Šimėnas V., 1996—Smailių kovos peiliai — durklai balti) kraštuose I m. e. tūkstanmečio viduryje. *Vidurio Lietuvos archeologija. Etnokultūriniai ryšiai*. Vilnius, 27—71.

Šimėnas V. 1999 - Prūsų kilmės beiėskant. Užmirėtieji prūsai. - Vilnius, p. 52-1 15.

Tabaczyńska E. 1999—A Thousand Years of Amber - Craft in Gdańsk. *Investigations into Amber*. Gdańsk, p. 177-80.

Tacitas P. K. 1972—**Rinkiniai** raštai, Vilnius.

Tautavičius A., 1996—Vidurinis geležies amžius I. ietuvoje. Vilnius.

Tempelmann — Mačzyńska M. 1985—**Die** Perlen der römischen Kaiserzeit und der frühen Phase der Völkerwanderungszeit im mitteleuropäischen Barbaricum. Mainz am Rhein.

Tuszyńska M. 1988—O zapinkach z gašenicowatym kabłąnkem w **obřęsie** kultury Wielharskiej. *Kultura Wielbarska w młodszym okresie rzymskim*. 1.1. Liublin, p. 177-187.

Vaitkunskienė L. 1992 a—Amber in the Art and Religion of Ancient Baits. *Contacts Across the Baltic Sea*. I.und, p. 49-57.

Vaitkunskienė L. 1992 b—Gintaras senovės baltų mene ir tikėjimuose. *Senovės baltų kultūra. Ikirikščioniėkosios Lietuvos kultūra*. Vilnius, p. 36 - 49.

Valatka V. 1984 - **Maudžiorų** plokėstinis kapinynas (1964 ir 1966 m. tyrinėjimų duomenys). *LA*. T. 3, p. 6 — 24.

Vaitkunskienė L. 1995—Pagybio kapinynas. *LA*. T. 13, Vilnius.

Vaitkunskienė L. 1999—Žvilių kapinynas. *LA*. T. 17, Vilnius.

Varnas A. 1978—Gintaro apdirbimas. *Lietuvių materialinė kultūra IX - XIII amžiuje*. 'L. 1. Vilnius, p. 1 17 - 124.

Wielowiejski J. 1976—Zycie codzienne na ziemiach polskich w okresie wpływów rzymskich (I-V w.). Warszawa.

Wielowiejski J. 1 980a—Główny szlak bursztynowy w czasach cesarstwa rzymskiego. Wrocław, Warszawa, Kraków, Gdańsk.

Wielowiejski J. 1980 b—Ożywiene głównego szlaku bursztynowego w IV-VI w. w. świetle znalezisk solidów medalionów. *Jota moneta w Polsce. VI sesja numizmatyczna w Nowej Soli 17-18 listopada 1977 r.* Nowa Soł, 1980, p. 14-21

Wielowiejski P. 1990—Skarb bursztynu z **poźniego** okresu rzymskiego odkryty w miejscowości Basonia, woj. Lubelskie. *PMZ*. 41, p. 101-33.

Wielowiejski P. 1997—Bernstein in der Przeworsk Kultur. *Bericht der Römische-Ciermanisdieu Kommission*. Band 77. 1996. Mainz am Rhein, p. 215-347.

Wolfram H. 1990—**The** History of the Goths. Los Angeles, London.

Żak J. 1962—Studia nad kontaktami handlowymi społeczeństw zachodniosłowiańskich ze skandynawskimi od VI do VIII w. n. e. Wrocław, Warszawa, Kraków, Gdańsk.

Zulkus V. 1 990—Palangos antroji senovinė gyvenvietė. *ATI. 1988 ir 1989 metais*. Vilnius, p. 37-41.

Zulkus V. 1 997 - Palangos **viduramžių** gyvenvietės. *Klaipėdos universiteto vakarų Lietuvos ir Prūsijos istorijos centras. Acta Historica Universitatis Klaipedensis. VI*. Klaipėda.

Zulkus V., Klimka L. 1989—Lietuvos pajūrio žemes viduramžiais. *Lietuvos istorija*. W\Ńn\š.

Abbreviations

AB—Archaeologica **Baltica**, Vilnius

ATL—Archeologiniai tyrinėjimai Lietuvoje..., Vilnius

BA—Baltų archeologija, Vilnius

LA—Lietuvos archeologija, Vilnius

I, IŠ -Lietuvos TSR istorijos šaltiniai, Vilnius, 1955

PMZ—Prace muzeum ziemi. Warszawa

Museums and other institutions

IDM PG—Lithuanian Art Museum, Vilnius; Palanga Amber Museum, Palanga.

LII. F. — Archive of Lithuanian institute of history, Vilnius.

LNMAR- Lithuanian National Museum, Department of Archaeology, Vilnius.

KrM - Kretinga Museum, Kretinga.

MLIM - Lithuania Minor History Museum, Klaipėda.

d. - district

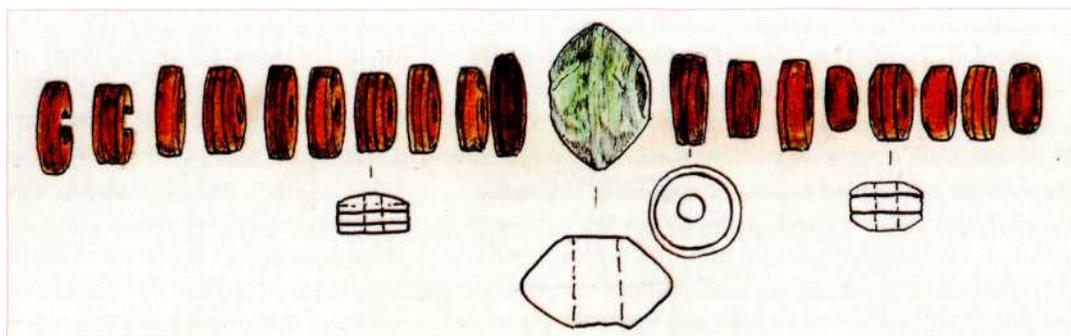


Fig. 11 Necklace from Plinkaigalis grave 51
(LNM AR 700:213)

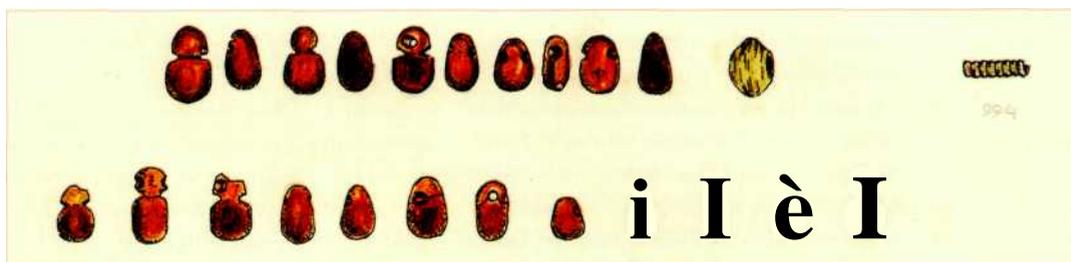


Fig. 12 Necklace of amber beads - pendants, glass bead
and bronze spiral from Plinkaigalis grave 313
(LNM AR 700:993 - 994)

Fig. 13 Necklace from Plinkaigalis cemetery grave 56
(LNM AR 700:26)

