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Amber on the Threshold of a World Career

It is a well known fact that amber was extremely important for prehistoric societies, in particular, for the ancient civilisations of the Old World. It is also beyond doubt that the world career of amber was a long and complex process that, however, had a beginning. It is the beginning that my interest is focused on. Being a vast issue calling for a complex and comprehensive study, it can be discussed now only preliminarily in this contribution which is the first step to implement a broader research programme.

Not every instance of the use of amber by prehistoric societies is interesting from the point of view of universal prehistory. Amber deposits of different richness are found practically in all regions of Europe (Harding 1984, Fig. 12), while amber goods incidentally occurred in various cultural contexts of the continent (Beck and Bouzek 1993; Kosmowska-Ceranowicz and Paner 1999).

When, however, and under what circumstances do such rare cases change into a cultural rule and how is the change manifested in archaeological finds?

I shall concentrate here only on the morphology of the process, i. e. I shall cite typological, chorological, and chronological data leaving aside genetic questions (which, incidentally, are the most interesting).

Despite a broad distribution of natural deposits of amber throughout Europe, of real cultural importance were the regions stretching from the Jutland Peninsula in the west to the south-eastern shores of the Baltic in the east. The deposits located there are rich enough to guarantee a constant supply of the raw material, which is a necessary condition for the rise of a cultural demand for any material. The amber-bearing zone can be divided into two major centres: Jutlandian and Sambian. A very characteristic trait of both of them is the presence of traces showing that amber was worked there for a long time. It is this very trait, namely profusion of amber workshops, that must be considered a principal one and that distinguishes Jutland and the shores of the south-eastern Baltic from other regions of Europe where amber is found. It is true that the presence of layers containing this raw material is confirmed in other regions of Europe by geological methods, but the fact remains that, culturally speaking, they left behind so few traces so as to elude archaeological detection.

Hence, for the 'world career' of amber to take off, these two regions of Europe had to join the network of trans-European, long-distance ties. Certainly, this was an absolute prerequisite. Here, we encounter the first major difference between the Jutlandian and Sambian centres.

The Jutlandian centre was joined to the long-distance system of cultural ties certainly during the development of the Funnel Beaker culture (FBC) or presumably even earlier. This

is evidenced by the appearance of the first metal objects there already in the Mesolithic (Klassen 1996). It is then, i. e. in the 4th and early 3rd millennia BC, that the centre was in its prime. It comprised FBC (Ebbesen 1986) and early developments of the Single Grave culture (SGC) (Damm 1991, 77, 84). What was produced there (Ebbesen 1986, Abb. 1) was mostly simple beads or buttons. The most spectacular products include beads shaped like axes with two edges (related to the FBC) and disks known from male graves of the oldest SGC (Damm 1991, Fig. 37) (Fig. 1). Even general knowledge of the distribution of amber goods within the FBC sphere is enough to recognize important regularities. The goods are known only from the northern and partially western groups of the FBC, while they are very rare in the eastern and south-eastern ones (Wislahski 1979).

It follows that amber was not exchanged in the whole network of cultural ties of the FBC. Thus, it can be said that in the case of the Jutlandian centre, the heyday of amber industry ended in the early 3rd millennium BC and had a local character. It was confined to Jutland

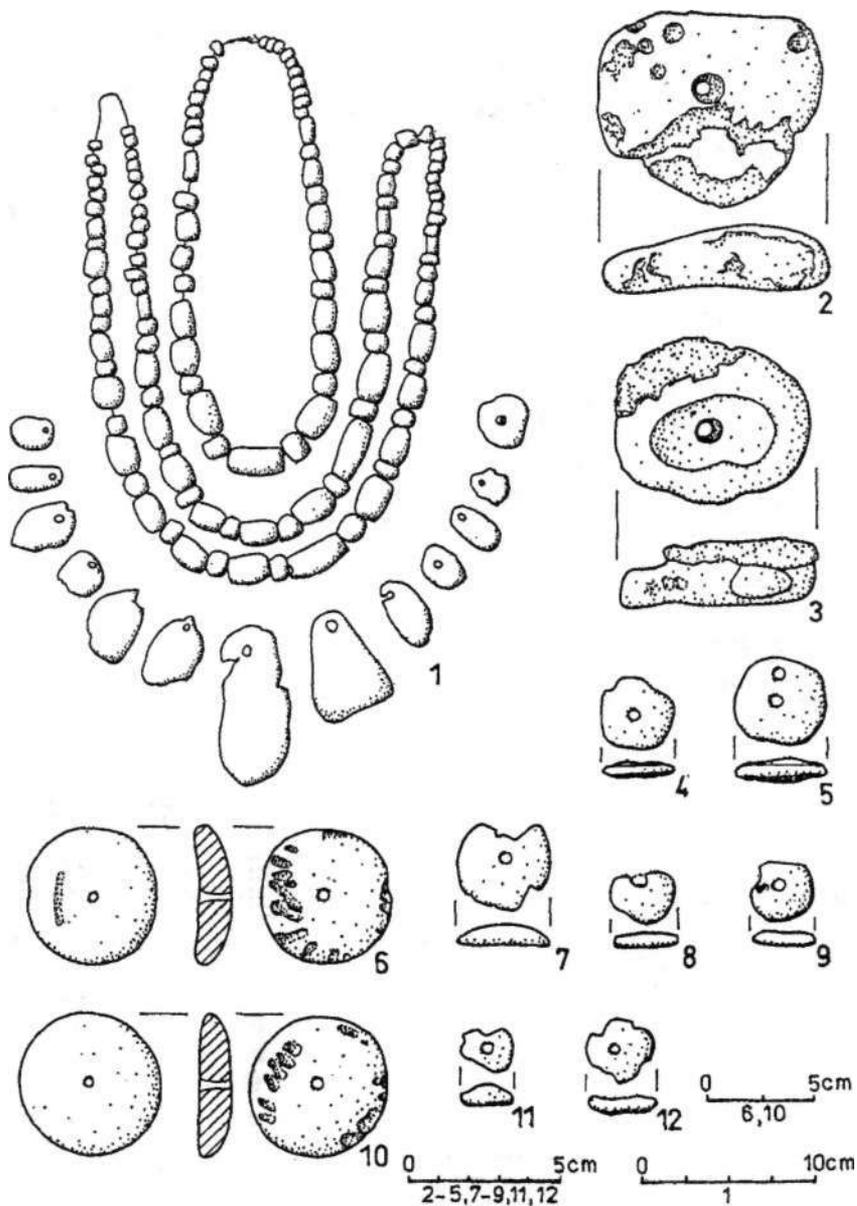


Fig. 1. Selection of amber objects mass produced in the Jutlandian centre

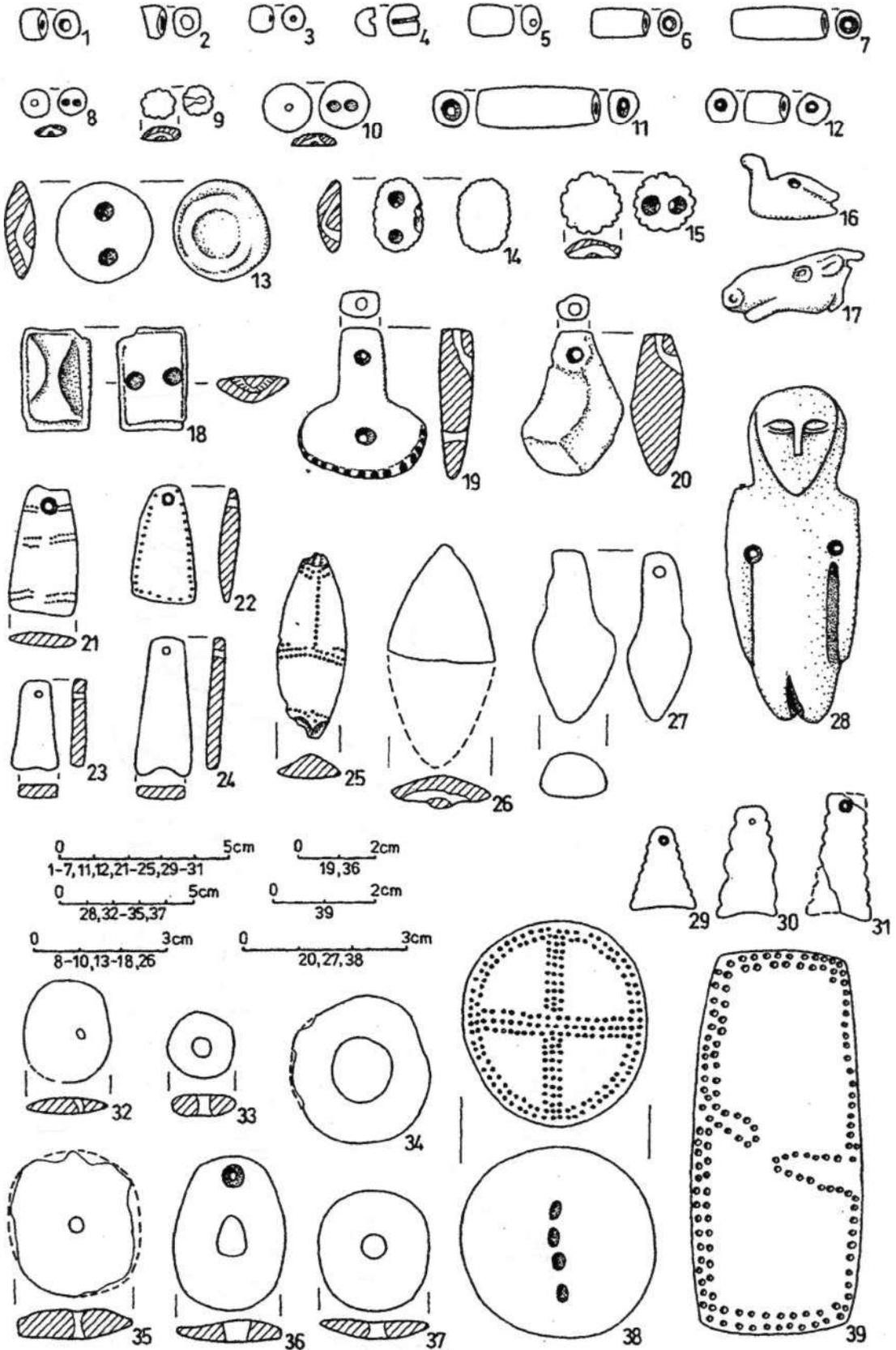


Fig. 2. Selection of amber objects in the Sambian and Latvian centres (after Czebreszuk 2001; Loze 1975,1993)

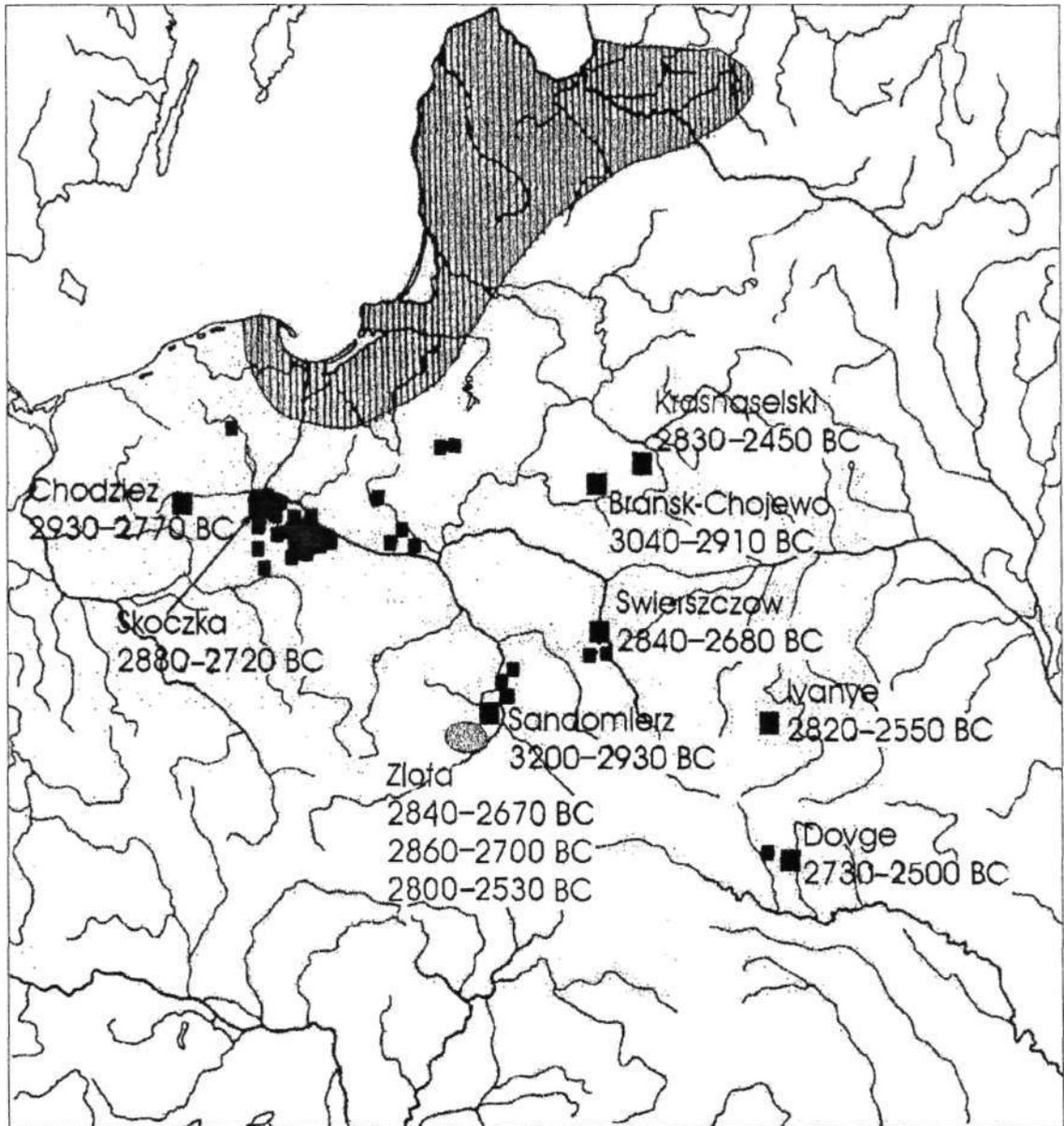


Fig. 3. Distribution of amber goods in the Globular Amphora culture and the so-called Złota culture

including Schleswig-Holstein, and Mecklenburg. The joining of a given centre of amber production as seen from the example of Jutland to a long-distance exchange network is a necessary but not sufficient condition for amber to attain the status of a strategic raw material on a European scale.

The situation in the Sambian centre is different and merits a broader discussion. Already from the beginning of the Neolithic, a rich local industry of typologically diverse goods flourished there. They were studied from many aspects by numerous scholars, many of whom are participants in this symposium (Chamiaski 1985; Gimbutas 1985; Loze 1975; 1988; Rimantiene 1984). Among the artifacts are various pendants, beads, particularly cylindrical ones, rings, disks and different kinds of V-perforated buttons (Czebreszuk and Makarowicz 1993) (Fig. 2). From many sites located in different parts of the Sambian centre, both in the littoral and farther inland, we have information indicating that these typologically diverse goods are of very early origin. Data from Sventoji (Rimantiene 1996), Sarnate (Vankina 1970, 138, 139), the Lubana Plain (Loze 1988; 1993) and

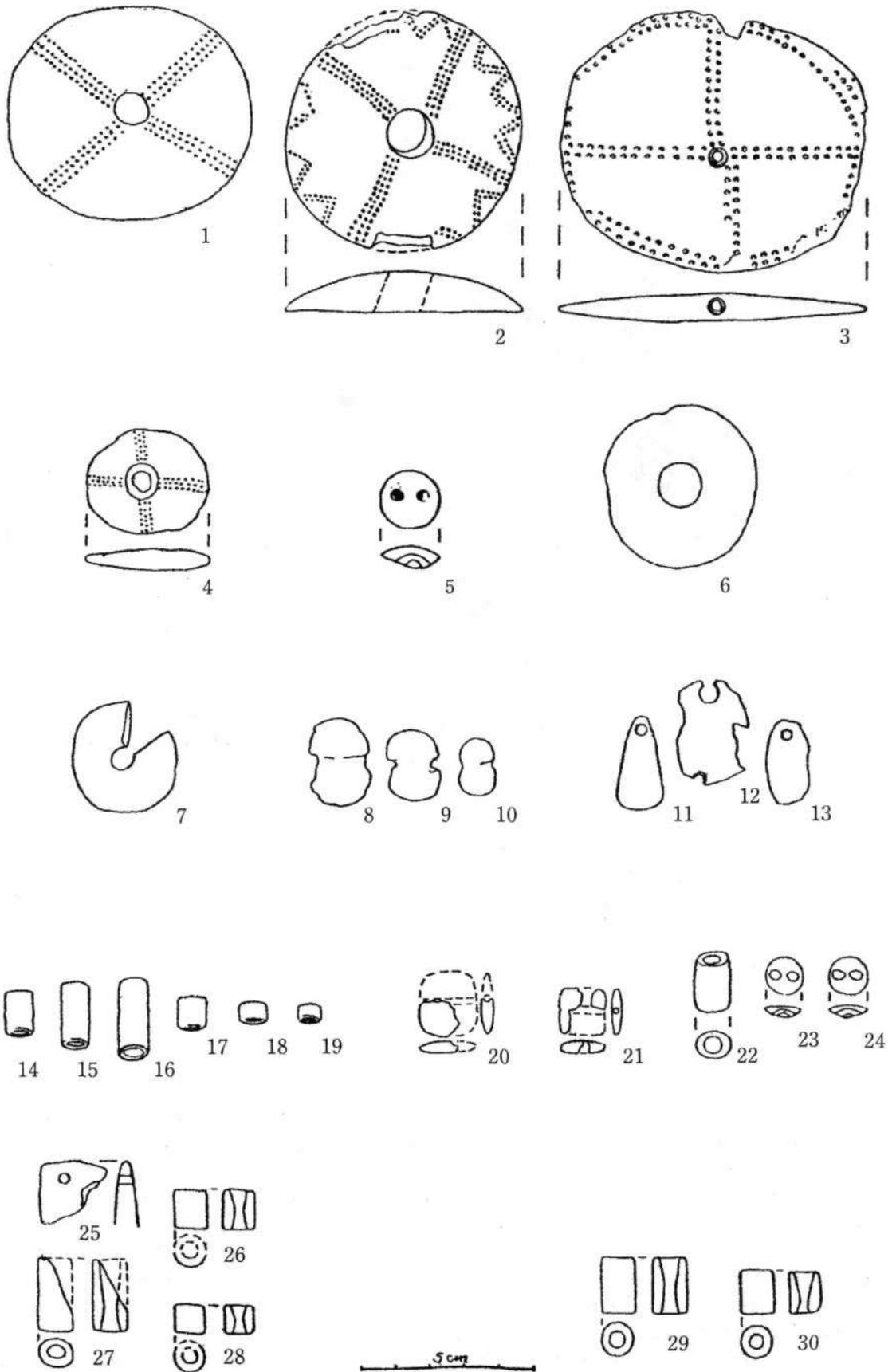


Fig. 4. Typology of amber goods in the Globular Amphora culture (after Nosek 1967)

Atmospheric data from Stuiver et al. (1998); OxCal v3.5 Bronk Ramsey (2000); cub r:4 ad:12 prob usp[strat]

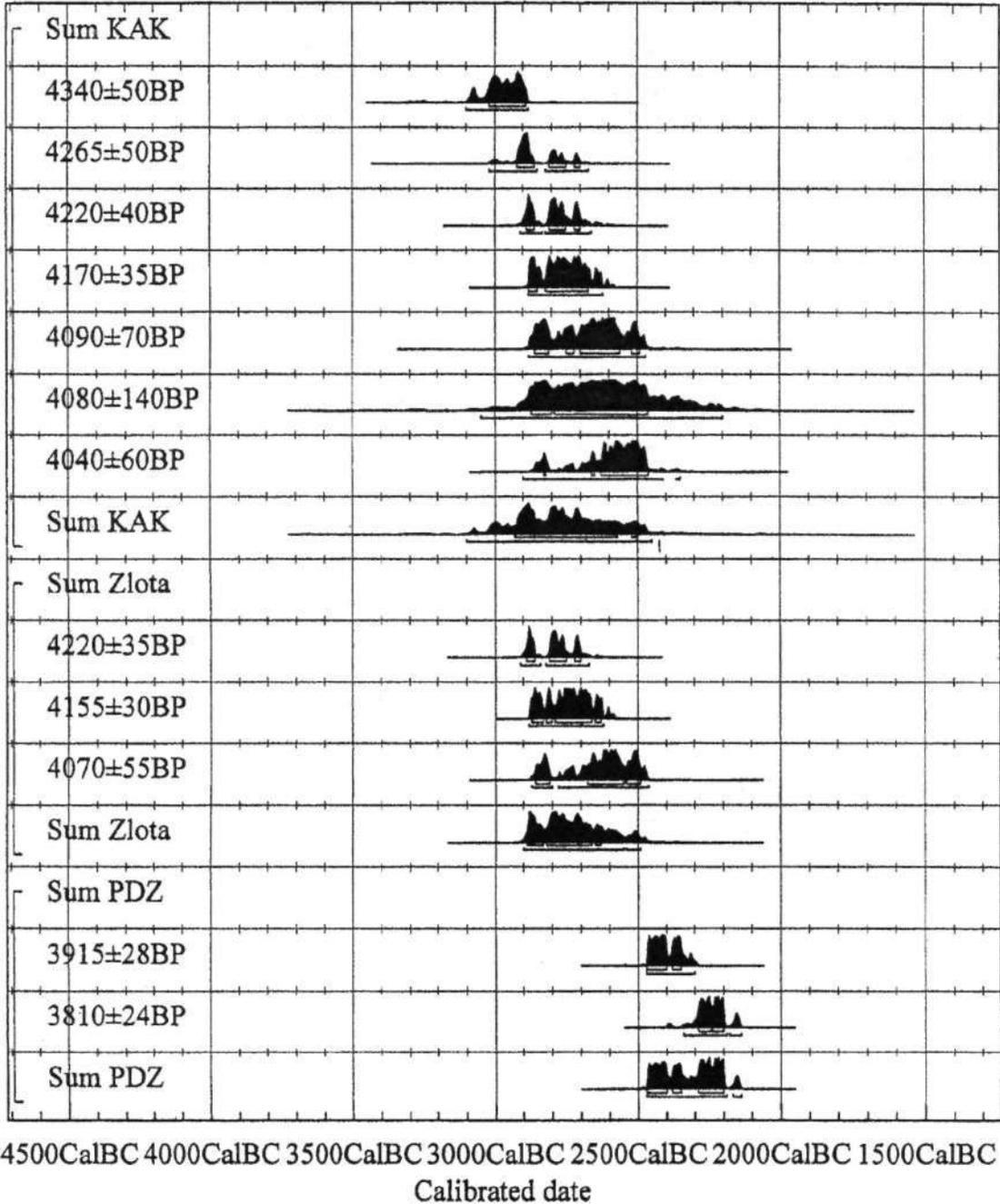


Fig. 5. Calibration of ¹⁴C dates referring to the amber goods assemblages of the Globular Amphora culture (KAK), the so-called Zlota culture (Zlota) and Bell Beakers (PDZ)

Żuławy Wislane [Vistula Estuary] (Mazurowski 1983) show that they were made already in the Early and Middle Neolithic, i. e. certainly in the 4th millennium BC. However, until the early 3rd millennium BC, the amber industry in the Sambian centre had a local character, practically limited to the south-east Baltic coast. It was so because these areas were only loosely connected with the culture of the Central European Neolithic (Kukawka 1997) through which trails leading to southern centres ran. A watershed is the arrival of Globular Amphora culture (GAC) representatives, coming from the Kujawy GAC agglomeration, on the south-east Baltic (Szmyt 1999). GAC traces, in particular in the form of pottery traits, are observable at the sites in Sventoji 4 (Rimantiene 1996;

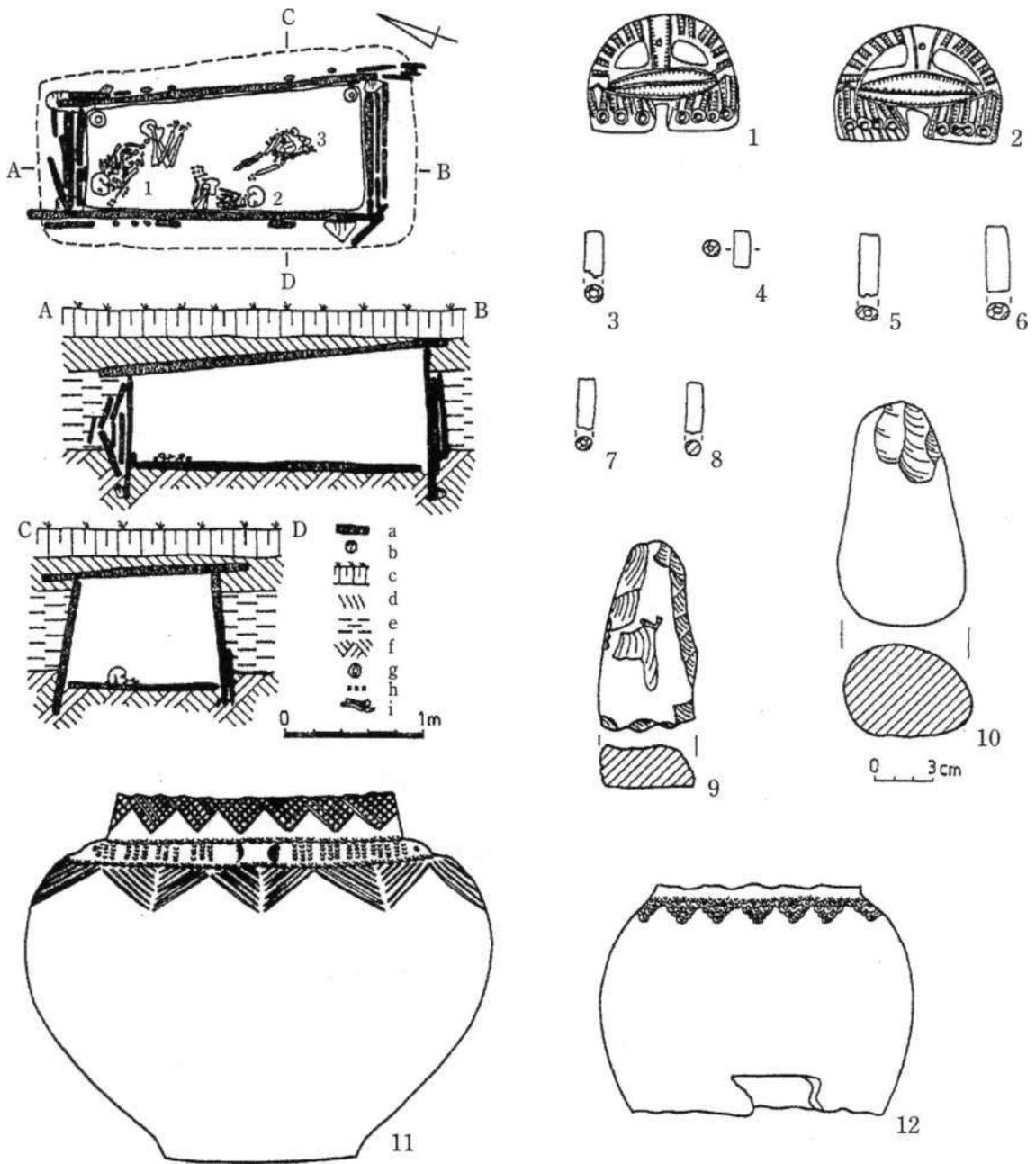


Fig. 6. Dovga, district of Tamopol, Ukraine. Plan and cross-sections of a grave and goods: *a* - slabs; *b* - stones; *c* - arable layer; *d* - chemozem; *e* - sand clay;/- rock-bed; *g* - vessels; *h* - amber ornaments; *i* - bones. 1-2 - bone; 3-8 - amber; 9-10 - flint; 11-12 - pottery (after Szmyt 1999)

Szmyt 1999, Fig. 39, 40:1-6), Svetojji 6 (Szmyt 1999, Figs. 40: 7-9; 41; 42) and Nida (Rimantiene 1989; Szmyt 1999, Fig. 43). Their origins are dated to ca. 2850 BC (Szmyt 1999, 71). It is also then that in GAC assemblages found virtually throughout the distribution area of the culture, amber goods began to appear (Fig. 3). Three typological groups dominate among them: disks, cylindrical beads and V-perforated buttons (Fig. 4). Their chronology may be determined on the basis of several ^{14}C dates obtained for GAC graves where such grave-goods were found (Figs. 3; 5). These are Brahsk-Chojewo, district of Bielsk Podlaski, 4340 ± 50 (Ki-6909), 3040-2910 BC, Chodziej 3, 4265 ± 50 (Bln-1549), 2930-2770 BC, Dovga, Tarnopol, Ukraine 4040 ± 60 (Ki-5009) 2730-2500 BC

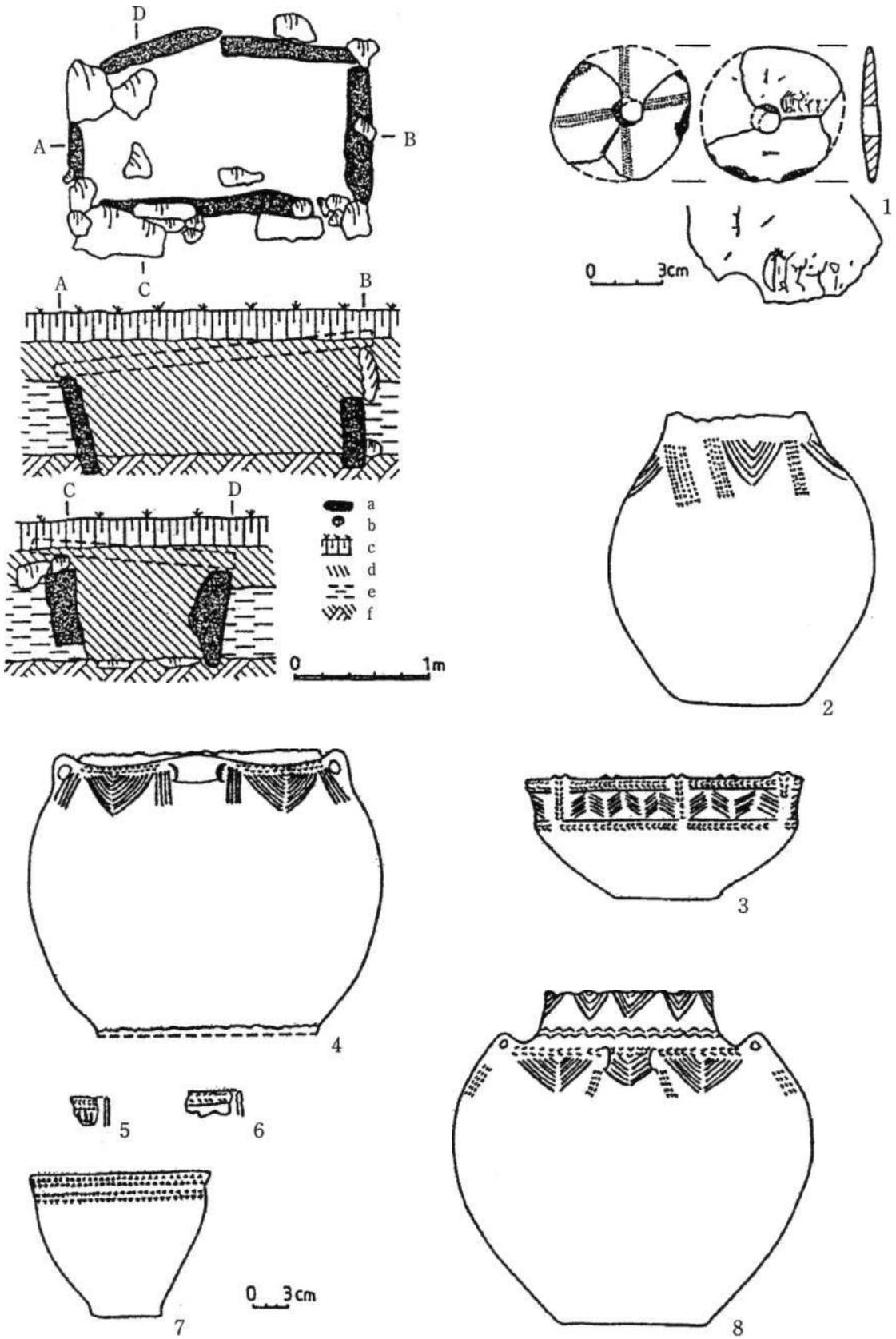


Fig. 7. Ivanye, district of Rovnoe, Ukraine. Plan and cross-sections of a grave and goods: a - slabs; b - stones; c - arable layer; d - chernozem; e - sand clay; f - rock-bed. 1 - amber; 2-8 - pottery (after Szmyt 1999)

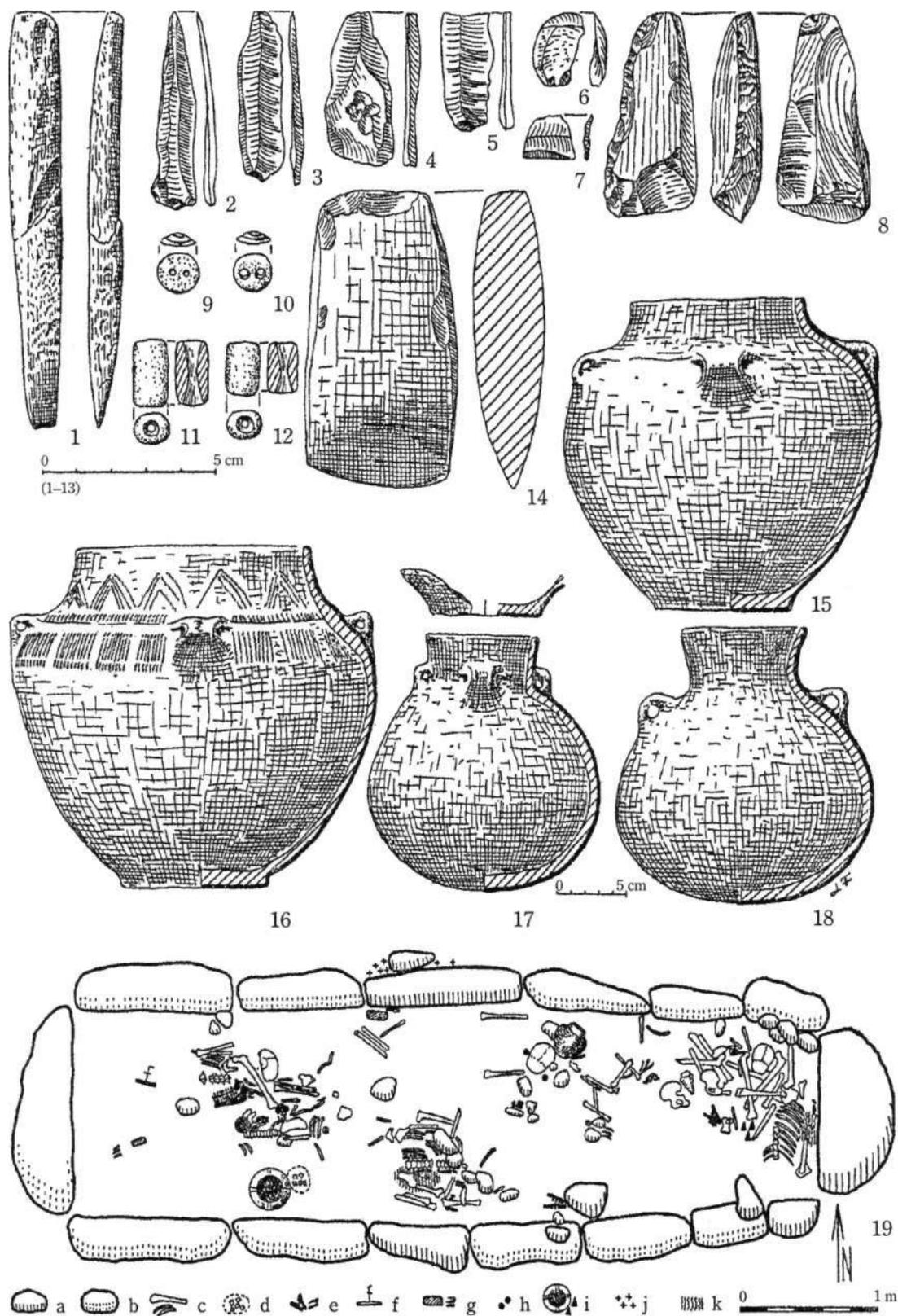


Fig. 8. Skoczka, district of Naklo, Poland. Plan of a grave and goods:
a - stones; *b* - stone removed before excavation; *c* - human bones; *d* - burnt human bones; *e* - animal bones;
 /- flint chisel; *g* - flint; *h* - amber; *i* - pottery; / - charcoals; *k* - scorched earth. 1 - bone; 2-8, 13 - flint;
 9-12 - amber; 14-18 - pottery (after Wiślański 1966)

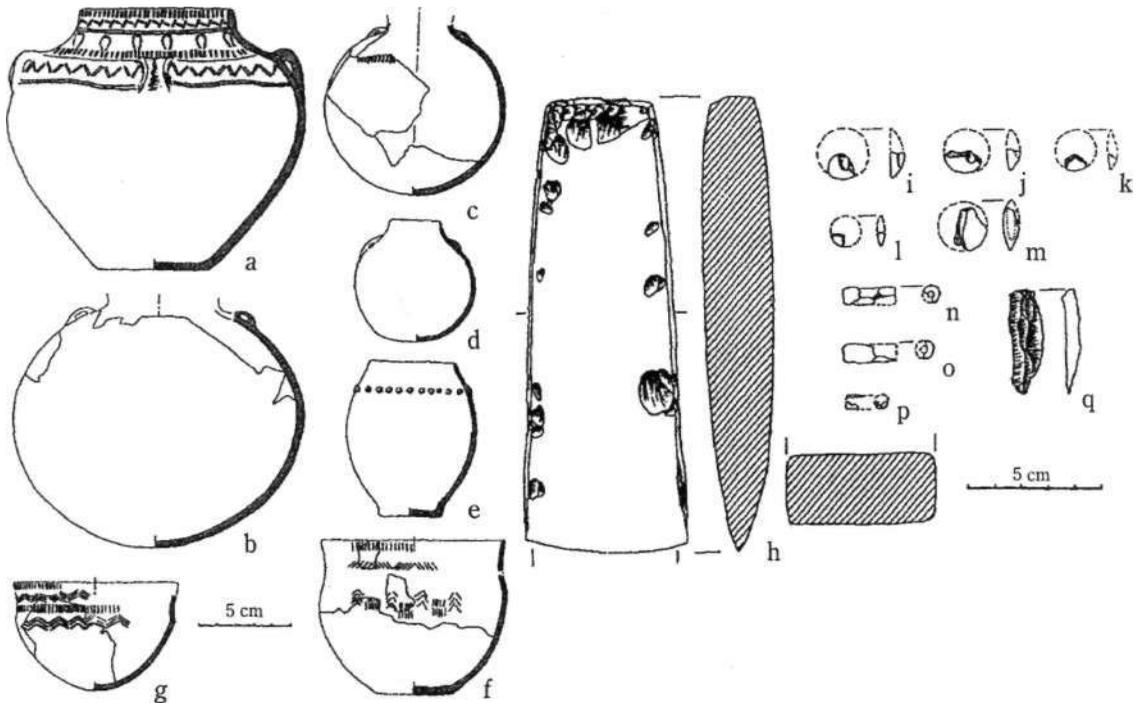


Fig. 9. Świerszczów, district of Hrubieszow, Poland. Goods from a grave: a-g - pottery; h, q - flint; i-p - amber (after Kadrow and Szmyt 1996)

(Fig. 6), Ivanye, Rovnoe, Ukraine, 4090 ± 70 (Le-5021), 2820-2550 BC (Fig. 7), Skoczka, district of Naklo, 4220 ± 40 (Ki-6329), 2880-2720 BC (Fig. 8), Swierszczow 27, district of Hrubieszow, 4170 ± 35 (Ki-5433), 2840-2680 BC (Fig. 9).

^{14}C dates obtained in the 1980s for the archival materials of the so-called Złota culture (ZC) revealed that amber products known from this group have a similar chronology to that of the GAC. In the series of eight ^{14}C dates referring to the ZC (Szmyt 1999, Annex 2, items 131-138), there are three dated graves, the goods of which included amber products: one in grave 43 in Złota, Stronghold I, skeleton b, 4155 ± 30 (GrN-12514), 2840-2670 BC and two in grave 10 (169) in Złota, Stronghold I, 4220 ± 35 (GrN-9141), 2860-2700 BC (skeleton B) and 4070 ± 55 (GrN-9147), 2800-2530 BC (skeleton C) (Krzak 1989, 255). The other dates fix a period of development for the whole of the so-called ZC covering the first half of the 3rd millennium BC. From the typological point of view 'Złota ambers' bear a marked similarity to products known from the GAC (Fig. 10). There, too, cylindrical beads, V-perforated buttons and disks dominate. A specific type found at Złota includes rectangular amber plates perforated in the corners (Fig. 10).

In conclusion, it has to be stressed that GAC populations (and those of the ZC) were first to use amber goods outside the main centres of their production. The stylistics of the products clearly shows their ties to the Sambian centre, which is also borne out by the chronological analysis.

Amber products appear in the GAC at a certain stage of its development, specifically in the early 3rd millennium BC, when its populations reached the south-eastern shores of the Baltic. What remains unclear is the date when GAC populations ceased to use amber, specifically, whether this date preceded the end of the culture's existence in individual regions or not.

However, the ^{14}C dates quoted above show that the use of amber by the GAC cannot have stopped before the middle of the 3rd millennium BC. At that time, the areas of the northern part of central Europe were reached by Bell Beaker (BB) traits (Czebreszuk 2001) - the other main protagonist of our story.

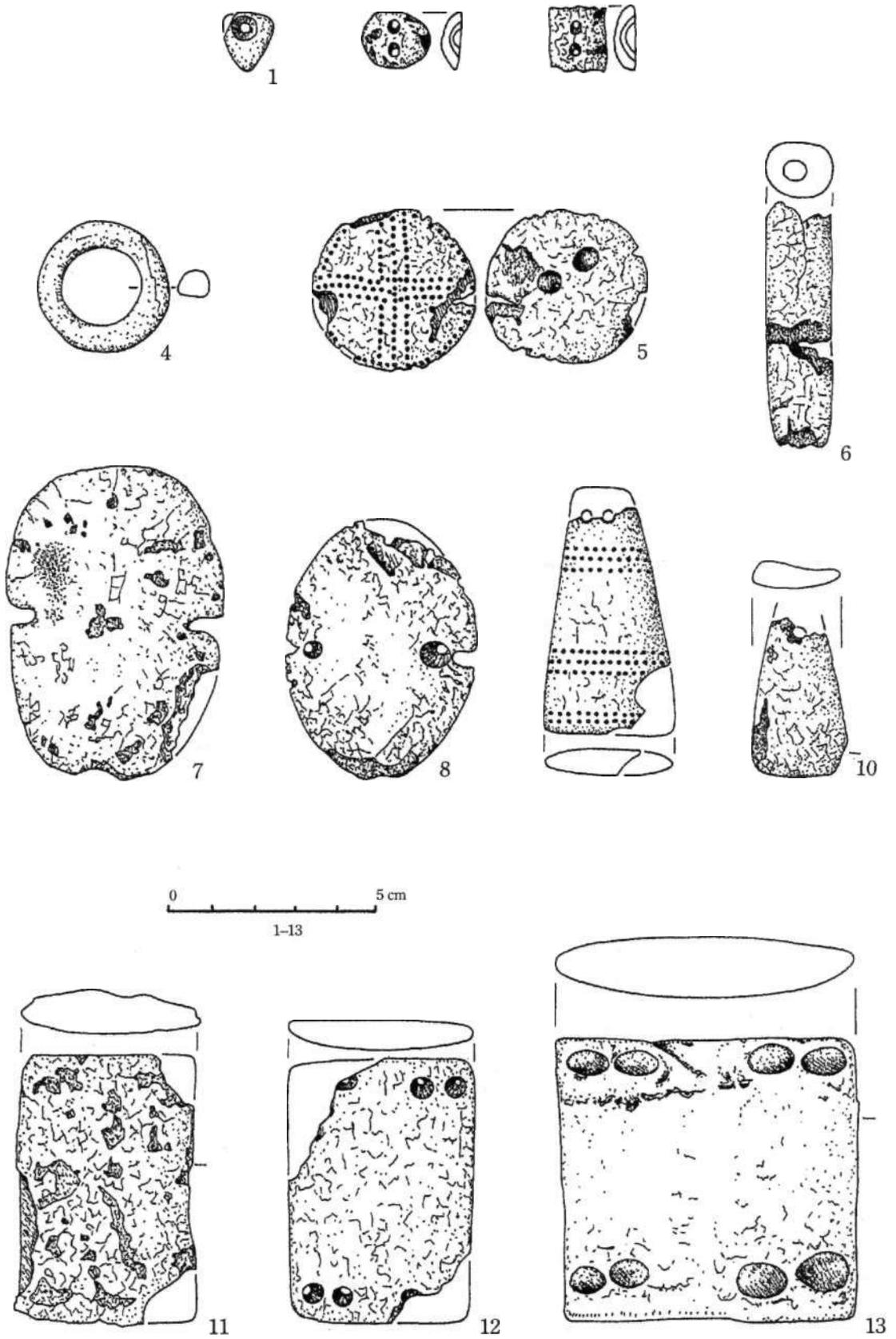


Fig. 10. Selection of amber objects of the so-called Złota culture (after Krzak 1976)

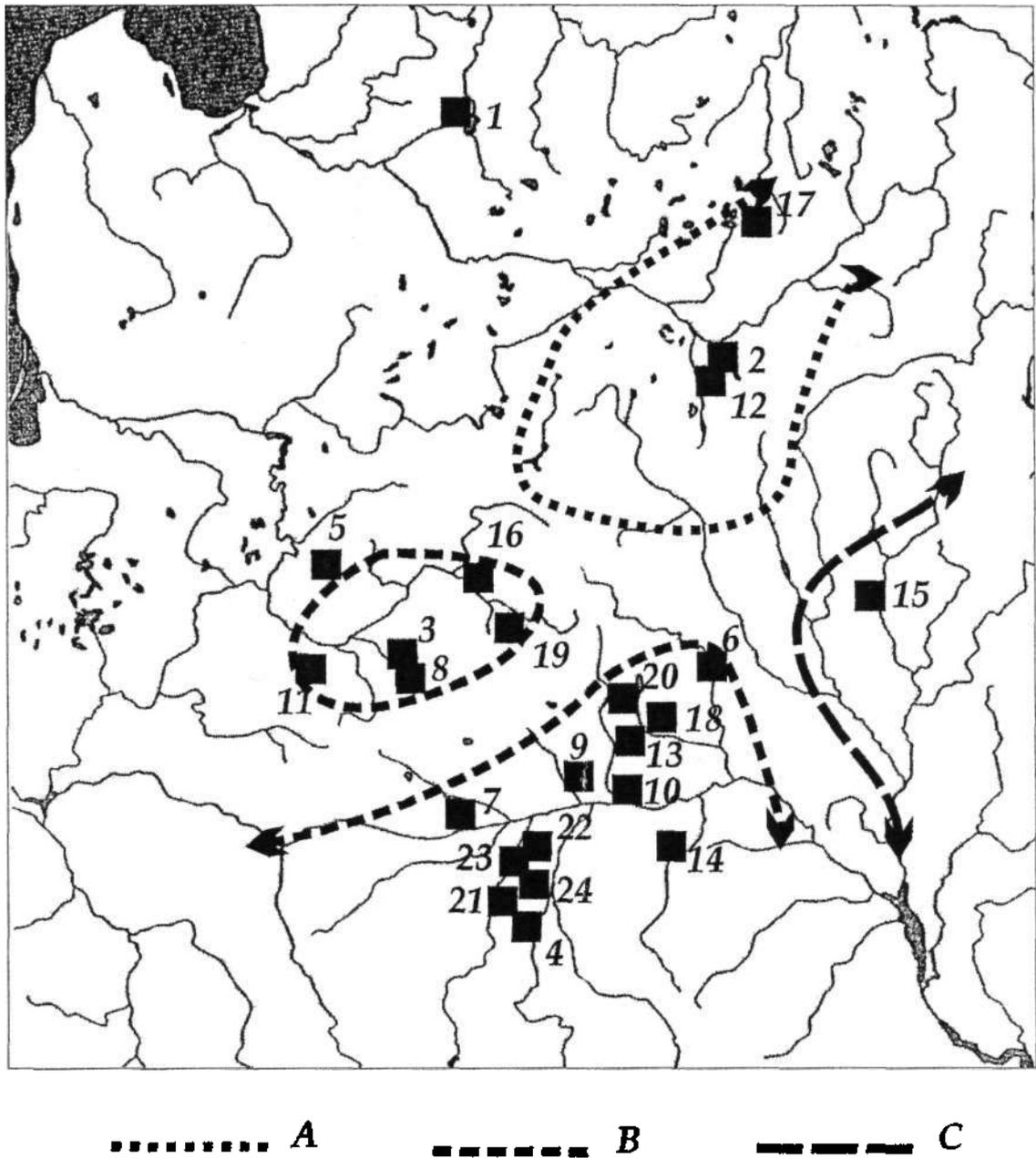


Fig. 11. Sites with transformed Bell Beaker traits in north-eastern Europe: A - North-Belarusian culture; B - concentrations of Trzciniec culture; C - Sosnia type; 1 - Abora I; 2 - Asaviec 2; 3 - Barzdis; 4 - Bachlicskij Chutor 1; 5 - Dubicaj; 6 - Glusk; 7 - Gnievcycy; 8 - Katra; 9 - Kazan-Gorodok; 10 - Kniaz'bor; 11 - Krasnoselsko 5; 12 - Kryviny II; 13 - Kutenko; 14 - Lipliany 5; 15 - Losa 1; 16 - Lysaja Gora; 17 - Meza; 18 - Ozernoje 1; 19 - Rusakovici 2; 20 - Staryje Jurkoviči 1; 21 - Struga I; 22 - Vikaroviči 1; 23 - Vikaroviči 2; 24 - Vikaroviči 3 (after Czebreszuk 2002)

BB are known in the lowland zone of central Europe in the whole second half of the 3rd millennium BC. This chronology is established by many independent sources of information such as series of ¹⁴C dates, results of analyses of contact assemblages (*Kontaktfunde*) and typologies of pottery and flint goods (especially daggers - Czebreszuk 2001, 116-142). The north-easternmost BB agglomeration was situated in Kujawy (Czebreszuk 2001, Ryc. 6). Sporadic traces of BB presence, however, are found much farther east (Czebreszuk 2002), as far as the upper Dnieper and Dvina drainages (Fig. 11).



Fig. 12. Distribution of amber goods in Bell Beakers

BB on the Polish and German Lowlands cannot be treated as an effect of migration. Their presence there must rather be considered a sign of new cultural trends that can be best described as a cultural package (Czebreszuk 2001) reaching these areas from the west and south-west.

The 'beaker network' knows practically only one type of amber product, namely V-perforated buttons (du Gardin 1998, Fig. 1). The most inclusive review of finds has been recently made by C. du Gardin (1998). Other products appear only sporadically. A dominant form among them is the simple, oval bead (du Gardin 1998, Fig. 1). However, the button form itself is encountered in other materials too: such buttons were also made of stone, bone or metal, including gold.

V-perforated amber buttons are known throughout the vast BB area covering Jutland, the British Isles, France (as far as the shores of the Mediterranean), northern Italy, Austria and Bohemia (Fig. 12). A few words of comment are due here to the Danish finds since the others have already been convincingly tied to the BB by du Gardin (1995; 1998).

Amber V-perforated buttons found in Denmark are related exclusively to the BB by scholars there (Vandkilde 1996). In the Jutlandian centre, there are no traces throughout prehistory of the

production of such buttons (Ebbesen 1986), including in the Late Neolithic I (Hirsch 1987), i. e. in the era of the BB. This evidence shows, therefore, that such buttons were not made in the Jutlandian centre (Czebreszuk and Makarowicz 1993, 530); quite to the contrary, they reached Jutland ready-made as one of the elements of the 'beaker assemblages'.

The chronology of the emergence of amber in BB is set by ¹⁴C dates referring to burials showing BB traits and whose grave-goods included amber products. We know such graves from the sites at Hedersleben, Kr. Mansfeld Land, 3810±24 (HD-19265), 2285-2195 BC (Muller 1999, 83, 84, Abb. 18: 6) and Trieching, Bavaria, 3915±28, 2460-2340 BC (information from Dr. V Heyd in Dresden). Generally speaking, amber began to be used in the 'beaker network' in the first decades of the second half of the 3rd millennium BC.

Also in this case, similarly to the situation with the GAC, we can observe a remarkable coincidence of two facts: the appearance of BB traits on the European Plain and the beginning of amber use in the 'beaker network'.

Therefore, it can be presumed that the proximity of the main production centres and a long tradition of using amber made it easier for the societies of the lower and middle Vistula or Oder to accede to the 'beaker network'. It was through this very network that amber reached the Mediterranean, specifically southern France or northern Italy, for the first time.

Conclusions

In the course of the 3rd millennium BC, a process of 'delocalisation' of amber as a raw material took place. The process was initiated by GAC populations (first half of the 3rd millennium BC) and later it continued through the BB network of interregional ties (second half of the 3rd millennium BC). The typological character of amber products encountered in both cultural contexts points to the primary importance of the Sambian centre at that stage of amber use. Moreover, chronological coincidences of the appearance of amber in the GAC and BB and relationships of these groups with the south-eastern Baltic may be adduced here as other arguments in favour of the proposed thesis.

The literature on the subject has rather marginalized the Sambian centre until now. The reason was that a majority of scholars preferred the Jutland centre (see the classical proposal of J. M. de Navarro 1925). The importance of the latter is documented in greater detail primarily for the developed stages of the Bronze and Iron Ages (Hachmann 1957; Harding and Hughes-Brock 1974; Harding 1984). In many cases such preferences were projected up the time scale, to the end of the Neolithic and the beginnings of the Bronze Age. In the light of the above information such manipulations are unjustified. The beginnings of the 'European career' of amber seem to be related to the Sambian centre. How the situation looked slightly later, namely in the early 2nd millennium BC, when the Unetice culture and Otomani culture developed in central Europe, and specifically precisely whence the Mycenaean culture obtained amber are issues calling for further intensive study.

Acknowledgments

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References

- Beck, C. W. and Bouzek, J. (eds.) 1993.** *Amber in Archaeology. Proceedings of the Second International Conference on Amber in Archaeology, Liblice 1990.* Praha.
- Charniauski, M. M. 1985.** "Starazytny bursztyn paunocznej Belarusi", in: *Pomniki kultury. Novija odkrycci.* Minsk, pp. 156-159.

- Czebreszuk, J. 2001.** *Schylek neolitu i pocztki epoki brzu w strefie poludniowo-zachodniobaltyckiej (III i pocztki Iltys. przed Chr.). Alternatywny model kultury.* Poznań.
- Czebreszuk, J. 2002.** "Poinocno-wschodnia rubiez oddziarywari idei Pucharow Dzwonowatych", in: Czebreszuk, J., Kryvalcevic, M., Makarowicz, P. (eds.) *Od neolityzacji do pocztkow epoki brzu. Przemiany kulturowe w miedzyrzeczu Odry i Dniepru miedzy VI i II tys. przed Chr.* Poznań, 327-340.
- Czebreszuk, J. and Makarowicz, P 1993.** "The Problem of Amber Buttons with V-shaped Perforation in the Bell Beaker Culture", *Actes du Xlle Congres International des Sciences Prehistoriques et Proto-historiques*, Bratislava, II: 529-532.
- Damm, Ch. 1991.** *Continuity and Change. An Analysis of Social and Material Patterns in the Danish Neolithic.* Cambridge.
- Ebbesen, K. 1995.** "Die nordischen Bemsteinhorte der Trichterbecherkultur", *Praehistorische Zeitschrift* 70, 1: 32-89.
- du Gardin, C. 1995.** *Laparure d'ambre au Neolithique a. l'dge du Bronze en Europe occidentale et nordique*, Doktorat, Universite de Rennes, Rennes.
- du Gardin, C. 1998.** "Le Campaniforme et l'ambre: mythe ou realite?" *Bulletin de la Societe Prehistorique Francaise* 95, 3: 343-350.
- Gimbutas, M. 1985.** "East Baltic Amber in the fourth and third Millennium B.C.", *Journal of Baltic Studies* 16, 3: 231-256.
- Hachmann, R. 1957.** "Bronzezeitliche Bernsteinschieber", *Bayerische Vorgeschichtsbldtter*, 22: 1-36.
- Harding, A. 1984.** *The Mycenaeans and Europe.* London.
- Harding, A. and Hughes-Brock, H. 1974.** "Amber in the Mycenaean World", *Annual British School of Athens* 69:144-172.
- Hirsch, K. 1987.** "Bernsteinverarbeitung in der Jungsteinzeit", *Archdologische Informationen* 10: 185-193.
- Kadrow, S. and Szmyt, M. 1996.** "Absolute Chronology of the Eastern Group of Globular Amphora Culture", *Baltic-Pontic Studies* 4:103-111.
- Klassen, L. 1996. *Die Kupferfunde der Nordgruppe der Trichterbecherkultur*, Doktorarbeit, Albert-Ludwigs-Universitat, Freiburg i. Br.
- Kosmowska-Ceranowicz, B. and Paner, H. (eds.) 1999.** *Investigations into Amber. Proceedings of the International Interdisciplinary Symposium: Baltic Amber and Other Fossil Resins 997 Urbs Gyddanyzc - 1997 Gdansk.* Gdarisk.
- Krzak, Z. 1976.** *The Zlota Culture.* Wroclaw.
- Krzak, Z. 1989.** "Zlota Culture, Zlota near Sandomierz, woj. Tarnobrzeg, site "Grodzisko I" and "Nad Wawrem". Cemeteries", *Przegld Archeologiczny* 36: 255-269.
- Kukawka, S. 1997.** *Na rubiezy srodkowoeuropejskiego swiata neolitycznego.* Toruń.
- Loze, I. 1975.** "Neolithic amber ornaments in the Eastern part of Latvia", *Przegld Archeologiczny* 23: 49-82.
- Loze, I. 1988.** *Poselenija kamennogo veka Lubanskoj niziny. Mezolit, rannij i srednij neolit.* Riga.
- Loze, I. 1993.** "Stone Age amber in the Eastern Baltic", in: Beck, C. W, Bouzek, J. (eds.) *Amber in Archaeology. Proceedings of the Second International Conference on Amber in Archaeology Liblice 1990.* Praha, pp. 129-140.
- Mazurowski, R. 1983.** "Bursztyn w epoce kamienia na ziemiach polskich", *Materialy Starozytne i Wczesno-sredniowieczne* 5: 7-134.

- Mxiller, J. 1999.** "Zur Radiokarbondatierung des Jung- bis Endneolithikums und der Fruhbronzezeit im Mittelbe-Saale-Gebiet (4100-1500 v. Ch.)", *Berichte der Romisch-Germanische Kommission* 80: 28-211.
- Nosek, S. 1967.** *Kultura amfor kulistych w Polsce*. Wroclaw.
- de Navarro, J. M. 1925.** "Prehistoric Routes between Northern Europe and Italy Defined by the Amber Trade", *The Geographical Journal* LXVI, 6: 481-507.
- Rimantiene, R. 1984.** *Akmens Amzius Lietuvoje*. Vilnius.
- Rimantiene, R. 1989.** *Nida. Semuju baity gyvenvieta*. Vilnius.
- Rimantiene, R. 1996.** "Sventosios 4-oji radimvieta", *Lietuvos Archeologija* 14: 5-79.
- Szmyt, M. 1999.** *Between West and East. People of the Globular Amphora Culture in Eastern Europe, Baltic-Pontic Studies* 8, Poznan.
- Vandkilde, H. 1996.** *From Stone to Bronze. The Metalwork of the Late Neolithic and Earliest Bronze Age in Denmark*. Aarhus.
- Vankina, L. V 1970.** *Torfjanikovaja stojanka Sarnate* (The peat-bog settlement of Sarnate). Riga.
- Wislanski, T. 1966.** *Kultura amfor kulistych w Polsce poinocno-zachodniej'*. Wroclaw.
- Wislanski, T. 1979.** "Kształtowanie si\$ miejscowych kultur rolniczo-hodowlanych. Plemiona kultury pucharow lejkowatych", in: Hensel, W, Wislanski, T. (eds.) *Prahistoria ziem polskich, II, Neolit*, 165-260, Wroclaw.