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## ABOUT THE DATING OF THE SCYTHIAN TYPE ARROWHEADS OF THE LATE HALLSTATT PERIOD FROM CENTRAL EUROPE

*The article deals with the problem of the arrowheads of the Scythian type dating from Central Europe of the Late Hallstatt period.*

*Key words: Central Europe, Late Hallstatt, HaD, nomads, campaign, arrowheads, fibulae.*

### *Introduction*

Traces of “Scythian raids” in Central Europe are well-known (Bukowski 1977; Скорый 1990; Хохоровски 1994; Chochorowski 2014; Бруяко 2005, с. 293—306). In recent years, the number of sites, at which traces of the assault were recorded, has grown. Their number has replenished: Trakhtemyriv hillfort in the Middle Dnieper (Фіалко, Болтрик 2003), Dédestapolcsány—Verebce-bérc in North-Eastern Hungary (Szabó, Czajlik, Reményi 2014) and Provodov—Ludkovice “Rysov” in Moravia (Novak 2017). These materials, as markers of the crossing the Dnieper by nomads, crossing the Carpathians, and the beginning of the campaign to the Lusatian lands, are important for finding out the direction of nomads movement and dating destructions in Central Europe <sup>1</sup>.

Unfortunately, the events of the first half of the VI c. BC were not described in written sources. In recent years, a transitional period between the Archaic and Classical Scythians was distinguished (Могилев 2008; Гречко 2012; 2016). It is associated with the appearance of new nomads in the Northern Pontic Region from Ciscaucasia and more eastern regions

after 580 BC. This period is characterized by the disappearance of Early Scythian material culture and the occurrence of new types of weapons (arrowheads, daggers etc.), horse bridle (the emergence and spread of two-hole cheek-pieces), cross-shaped plaques.

Until now, the nature of nomadic penetration to the west, the chronology of these events, the particular number of invasions and their routes are being actively discussed. Recently, several works dealing with the new Scythian type finds in Central Europe and analysis of old materials have appeared (Парцигер 1998, с. 104—115; Hellmuth 2006; Chochorowski 2014) (Tab. 1). The researchers assumed two Scythian campaigns into Central Europe in the VI c. BC and have seen different reasons of the fortifications destruction in Central Europe (Chochorowski 2014, s. 37). Anna Hellmuth made these events half a century older (Hellmuth 2006, S. 156—157). Analysis of these articles showed that the researchers did not date quite correctly materials of the Eastern origin and could not correctly identify the aggressors.

The aim of this work is to clarify the dating of the materials of eastern provenance from Central Europe of the Late Hallstatt period and a variant of the correlation of Scythian and Hallstatt chronological schemes.

### *The arrowheads of the Scythian type from the fortifications in Central Europe of the Late Hallstatt period*

The arrowheads of the so-called Scythian type are important for dating the destruction of fortifications in Central Europe.

**Smolenice-Molpir (Kalendenberg culture).** Traces of destruction are well-known from the site Smolenice-Molpir (South-Western Slovakia). The fortification controlled a convenient passage through the Small Carpathians in this section of the Amber Road (Fig. 1). A significant part of the researchers at the moment date the destruction

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<sup>1</sup> The findings of arrowheads, which were typical for the Vekerzug culture will not be analyzed in the article. They belong to the next chronological horizon and mark the military activity of the carriers of this culture.

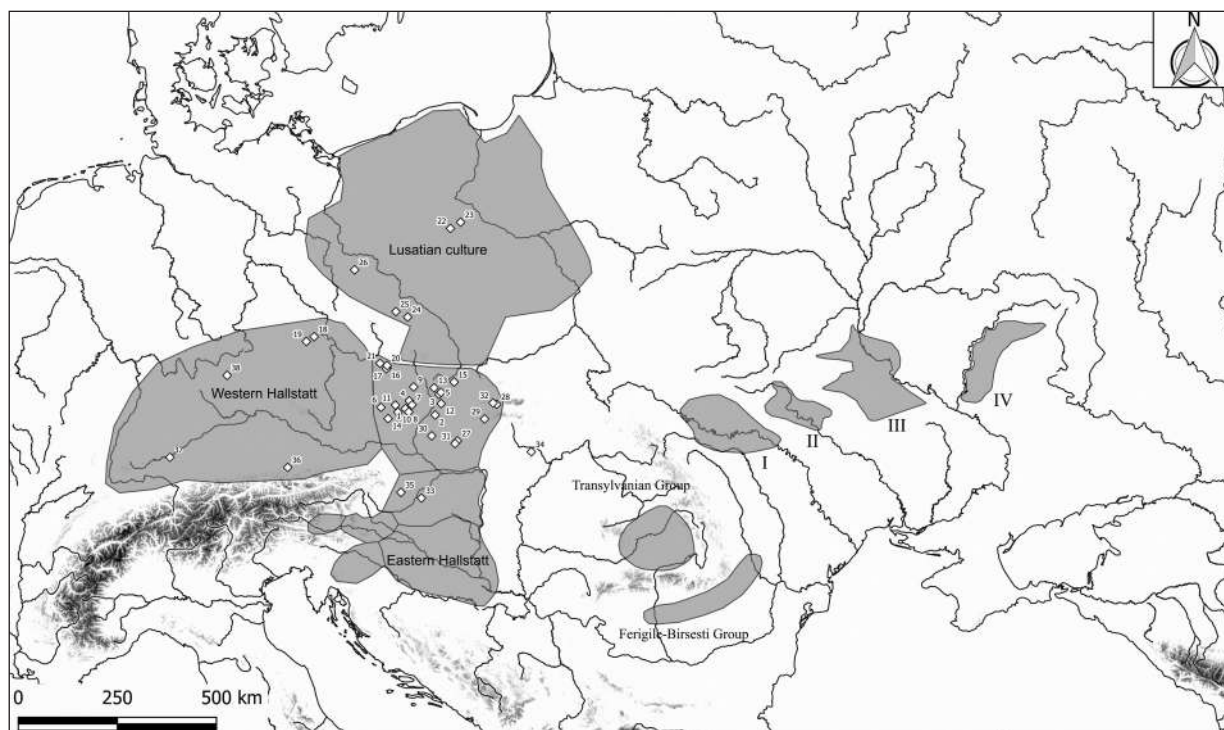


Fig. 1. Traces of the nomad raids in Central and Eastern Europe and arrowheads of the transitional period (the turn of the Ha D1/HaD2). 1. Findings of arrowheads of the Scythian type (1 – Blučina; 2 – Boršice u Blatnice; 3 – Brusné; 4 – Horákov; 5 – Chvalčov; 6 – Jaroměřice nad Rokytnou; 7 – Křenovice; 8 – Krčepice; 9 – Malé Hradisko; 10 – Olbramovice; 11 – Oslavany; 12 – Provodov-Ludkovice “Rysov”; 13 – Radslavice; 14 – Suchohrdly; 15 – Štramperk Kotouč; 16 – Doly Rabouň; 17 – Lhota; 18 – Měrunice; 19 – Minice; 20 – Pěšice; 21 – Topol “Na skale”; 22 – Kamienec; 23 – Kruszwica; 24 – Sobótka “Śleza”; 25 – Strzegom; 26 – Wicina; 27 – Kostofany pod Tribečom; 28 – Liptovská Sielnica; 29 – Prasnic; 30 – Smolenice-Molpir; 31 – Štitáre; 32 – Vyšný Kubín; 33 – Celldömölk; 34 – Dédestapolcsány; 35 – Velem; 36 – Hellbrunnerberg; 37 – Heuneburg; 38 – Kirchehrenbach

of the settlement near the turn of the VII–VI c. BC (Parzinger–Stegmann-Rajtár 1988, S. 175–178; Chochorowski 2014, s. 37; Брыяко 2005, с. 299). Such dating is based on the synchronization of arrowhead sets from Central Europe with Repiakhuvata Mohyla, burial No. 2 and the Kelermes period in the Eastern Europe (Hellmuth 2006; Chochorowski 2014, s. 37; Брыяко 2005, с. 299–301). This event occurred before the appearance of the monuments of the Vekerzug culture in South-Western Slovakia (Parzinger–Stegmann-Rajtár 1988, S. 175–178).

The site has materials from the Eneolithic to the Middle Ages (Barta et al. 2017, p. 528). Unfortunately, the materials, which obtained by Mikuláš Dushek were not correlated with certain layers and poorly documented. Attempts to systematize materials have been made in recent years (Stegmann-Rajtár 2005; Muller 2012).

The most detailed set of arrows (373 items) from Smolenice-Molpir was studied by Anna Hellmuth. Traditionally, arrowheads have been divided into four classical groups (two-, three-

Table 1. Opinions of scientists about the time and causes of the fortifications destruction in Central Europe in the Late Hallstatt period

|                                 | Smolenice-Molpir destruction                       | Wicina destruction | The reasons  |
|---------------------------------|--|--------------------|--|
| Chochorowski J. (2014, s. 37)   | Late 7 <sup>th</sup> – early 6 <sup>th</sup> c. BC | 520/510 BC         | Transylvanian and West-Podolian nomads aggression (2013, c. 67)  |
| Parzinger H. (1998, c. 110–114) | Late 7 <sup>th</sup> – early 6 <sup>th</sup> c. BC | near 500 BC        | Intra-European strife, cultural influences, borrowing  |
| Hellmuth A. (2006, S. 156–157)  | Second half of the 7 <sup>th</sup> c. BC           |                    | It was a part of significant historical processes, and not intra-tribal conflicts of the Central European tribes |

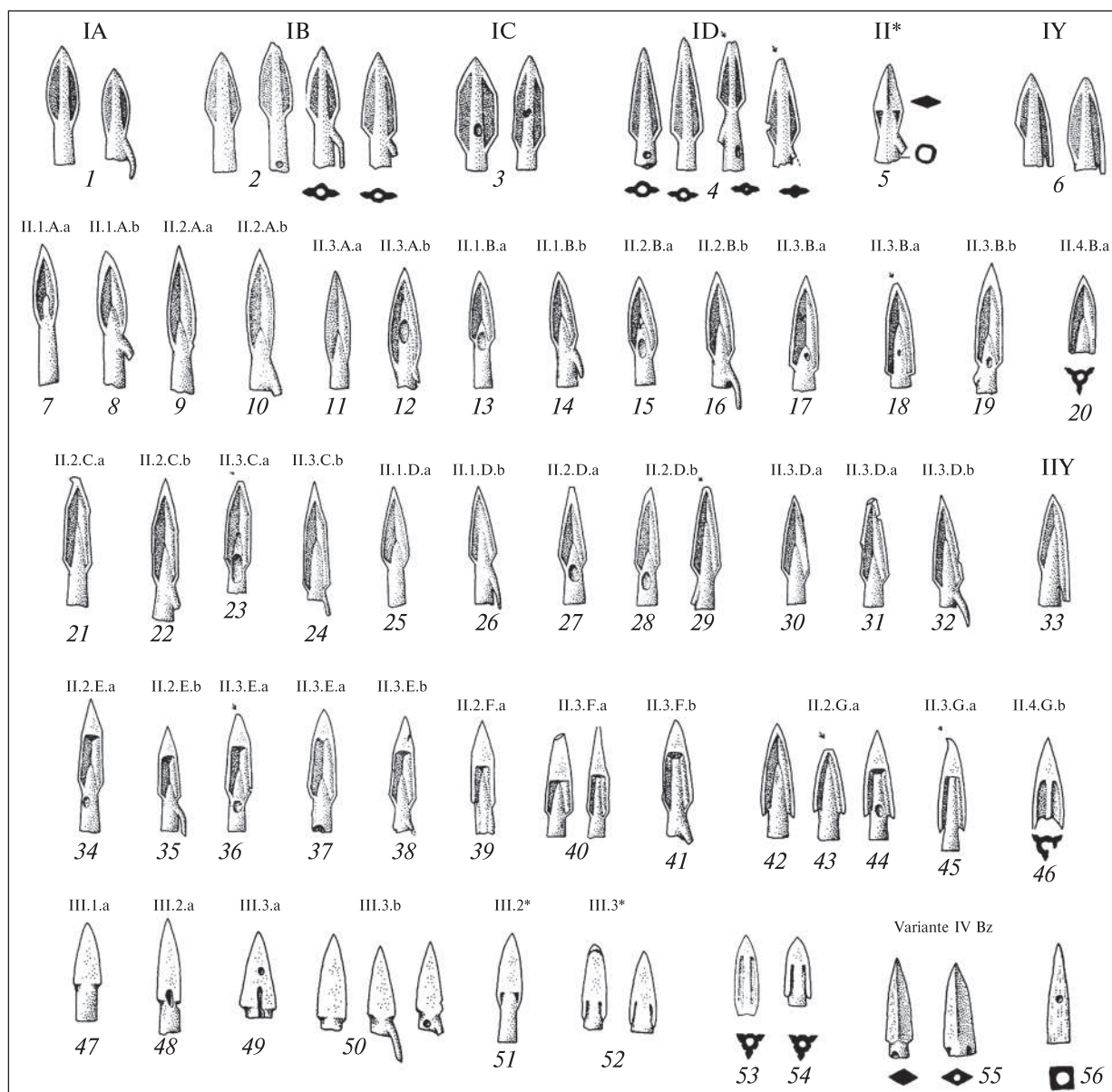


Fig. 2. Arrowheads from Smolenice—Molpir (after: Hellmuth 2006)

winged, trihedral and tetrahedral) (Hellmuth 2006, S. 26—27). To determine the origin of the aggressors, data about arrowheads from Poland, the Czech Republic, Slovakia, Hungary, Romania, Slovenia and parts of Austria were collected. Anticipated analysis pointed to a single group in Central Europe, where burials of nomads from the middle of the VII to the first quarter of the VI c. BC are known — Transylvanian<sup>2</sup>. Let us consider in more detail the types and variants of arrowheads, which A. Hellmuth singled out, as well as on her some important conclusions.

<sup>2</sup> Nevertheless, Anna Hellmuth notes that, in addition to the Transylvanian population, groups outside the analyzed region could also have taken part in the aggression (Hellmuth 2006, S. 157).

Groups IA and IB<sup>3</sup> are the classical two-winged types of the Kelermes period (mid-VII — first quarter of the VI c. BC) (Fig. 2: 1—2). In small amount, they continue to be used during the transitional period (Гречко 2016, с. 43). Group IY with a wing-thorn is also well-known in the complexes of the second half of the VII — first half of the VI c. BC (Fig. 2: 6) (Гречко 2012; 2016, с. 43).

Group IC is more rare and unknown in Transylvanian complexes<sup>4</sup> (Fig. 2: 3). Arrowheads of this type were found in the complexes in the south

<sup>3</sup> Differ only in the angle of sharpening at the base of the wings.

<sup>4</sup> The arrowhead from Posmus is different from this type. The wings of the one expand closer to the socket (shaft), and are not parallel. The arrowheads from this complex are not drawn very accurately (Vulpe 1990, Taf. 42: A2).



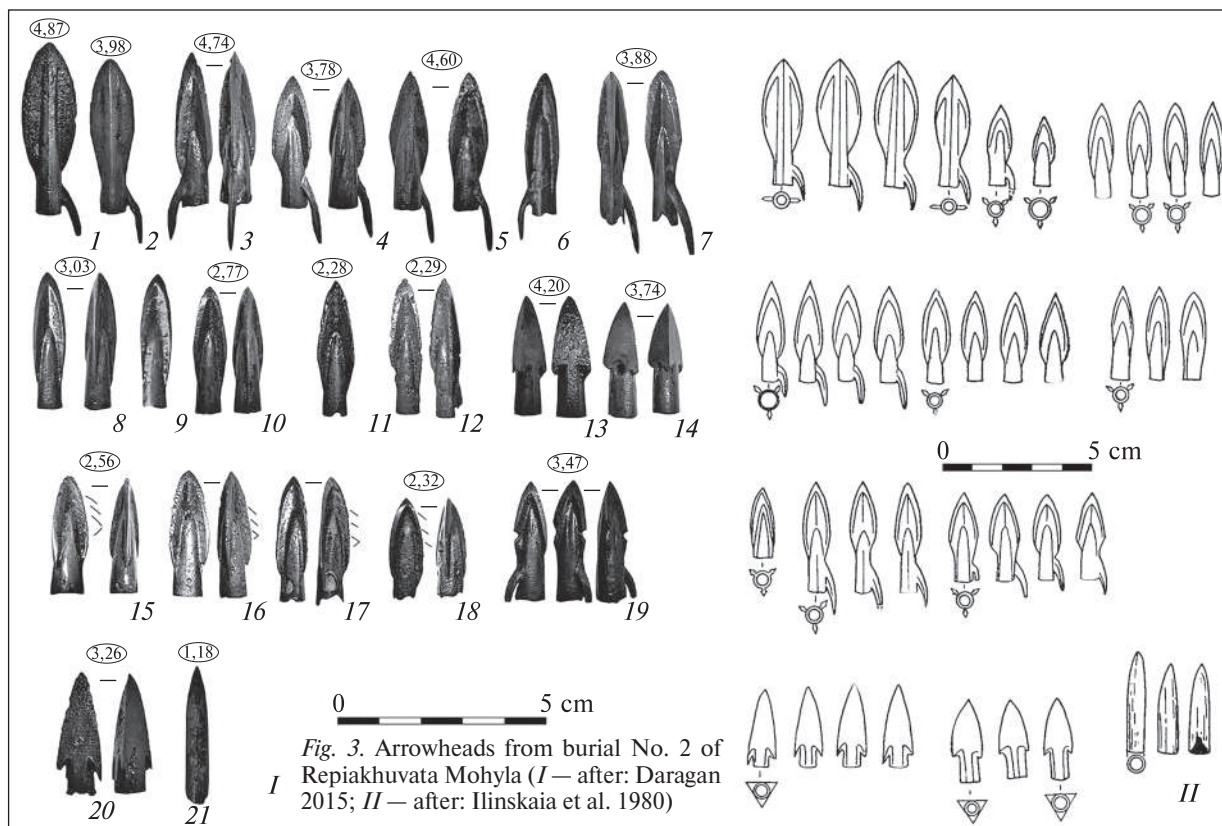


Fig. 3. Arrowheads from burial No. 2 of Repiakhuvata Mohyla (I — after: Daragan 2015; II — after: Ilinskaia et al. 1980)

of Eastern Europe and belong to the transitional period (Гречко 2016, с. 43).

Tetrahedral arrowhead (variant I I/I\*) from the house No. 44 was associated with the Zhabotyń two-winged arrows (Hellmuth 2006, S. 50—51), which is unacceptable (Fig. 2: 5). The closest well-dated find is the one from Novoaleksandrovka, barrow No. 7, burial No. 8 (Hellmuth 2006, Taf. 3: 1).

Three-winged arrowheads dominate among those which were found in Smolenice-Molpire. Groups II A, B, D (II. 1. D. a and b)<sup>5</sup> are represented by the classic three-winged arrowheads of the Kelermes type (second half of the VII — first half of the VI c. BC) (Fig. 2: 7—15, 25—31). They are well-known in the Transylvanian group and more eastern regions.

Variant II 4.V.a. is unique among the Smolenice-Molpir collection (Fig. 2: 20). If it were not for Anna Hellmuth's visual acquaintance with the find, one would have thought that this was a fragment of an arrowhead of type II A or B. This variant is typical for the quiver sets of the following chronological horizon (the Vekerzug culture and Vitova Mohyla horizon) (Hellmuth 2006, S. 85, Abb. 60, Taf. 56).

Groups II C, E, F are represented by three-winged arrowheads with a tower-shaped head

(Fig. 2: 19, 21, 34—41). Such a shape is unknown among the graves of the burial No. 2 of Repiakhuvata Mohyla horizon. Groups refer to the transitional period (Гречко 2016, с. 44—45). The Anna Hellmuth's maps clearly show that these arrows are associated with nomads who were outside the territory which was analyzed by A. Hellmuth. They are unknown in the Transylvanian group (Hellmuth 2006, S. 98: Abb. 67; S. 110: 80; S.115: Abb. 86). This group of arrows, together with types I C and II D<sup>6</sup>, is important for dating the events which are considered in the work. Groups I A, I B, I Y, II A, B and D<sup>7</sup> are "background" and indicate chronological proximity to the burial No. 2 of Repiakhuvata Mohyla horizon.

Group II G as a whole is known among the finds in the complexes of the middle VII — first quarter of the VI c. BC in Transylvania (Fig. 2: 42—44). Exceptions are only arrowheads that belong to the transitional period (Hellmuth 2006, Taf. 16: 3, 4, 5)<sup>8</sup> (Fig. 2: 45—46).

Anna Hellmuth identified two types II E and II F that are unknown in the Eastern Europe (Hellmuth

<sup>5</sup> Variants II. 2.D.a, II. 2.D.b, and especially II. 3.D.a, II. 3. D.b. refer to the transitional period.

<sup>6</sup> Variants II.2.D.b, II. 3. D.a, II. 3. D.b. find analogies in Perebykivtsi (Fig. 4: B) and are unknown in the burial No. 2 of Repiakhuvata Mohyla horizon (Fig. 3).

<sup>7</sup> Variants II.2.D.b, II.3.D.a, II.3.D.b. are unknown in the burial No. 2 of Repiakhuvata Mohyla horizon (Fig. 3).

<sup>8</sup> They are typical for the horizon of the next period.

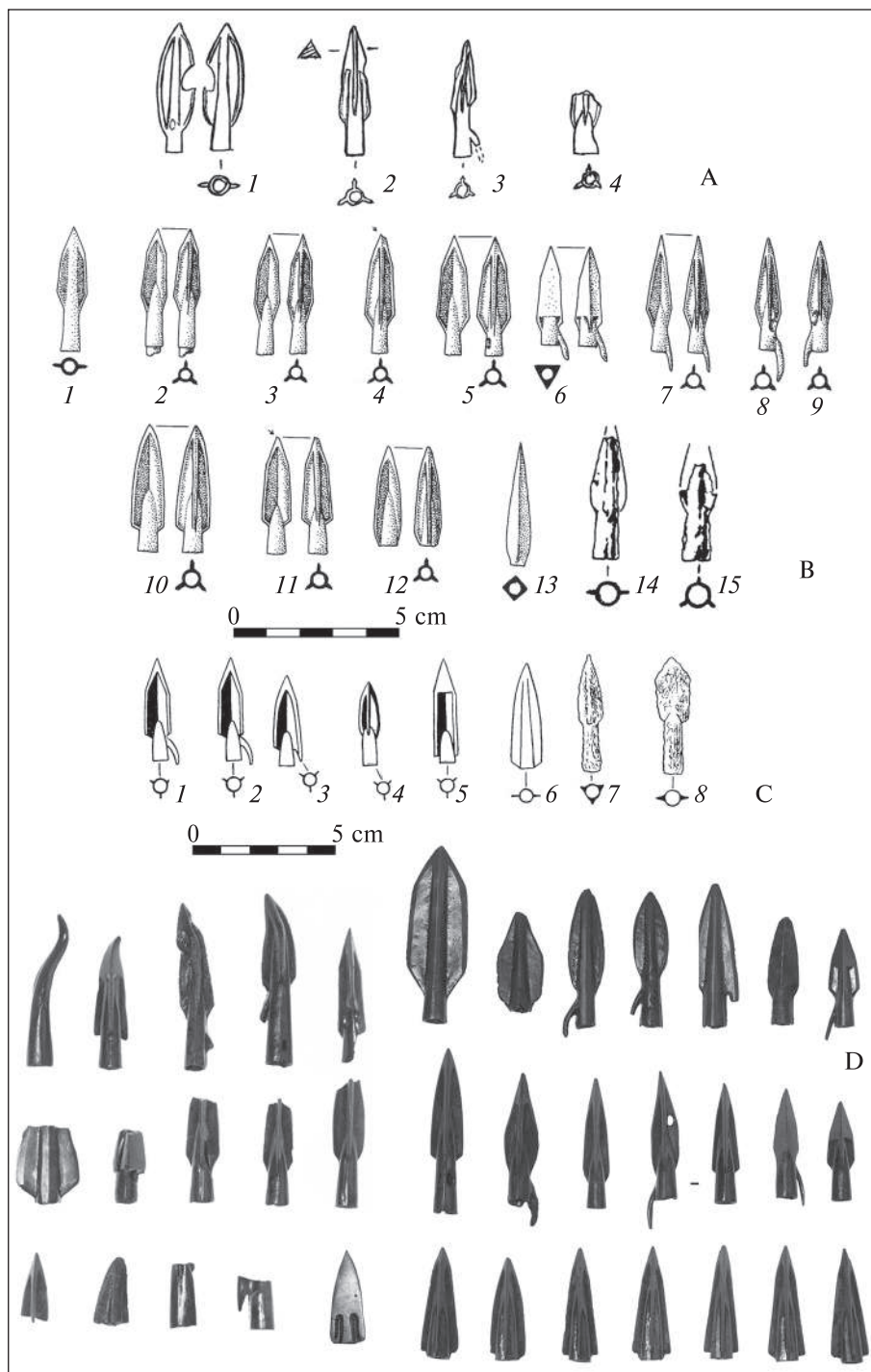


Fig. 4. Arrowhead sets of the transitional period. A — Hlybochok; B — Perebykivtsi (burial No. 2); C — Natran, burial No. 5; D — Dédestapolcsány-Verebce-bérc (Smirnova 1979; Batchaev 1985; Szabó, Czajlik, Reményi 2014; Bandrivskiy 2014)

2006, S. 157). These groups are similar in shape of the head to the Group II C. Arrowheads of this type are known among the finds in the mounds near the village Hlybochok on the Middle Dniester (Fig. 4: A, 2) (Бандрівський 2014, с. 316, рис. 159: 7) and mound No. 5 of the Nartan burial ground in Northern Caucasus (Fig. 4: C, 5) (Батчаев 1985, табл. 19, 25). Interestingly, such arrows are also

encountered in the complexes of the transitional period at the Volga (Pokrovsk (Engels) burial No. 5/3, Wiesenmiller burial No. 3/3 (Смирнов 1964, рис. 7, 6а, 11, 4).

There are also interesting three-winged arrowheads with one wing-thorn (group II Y) (Fig. 2: 33) (Hellmuth 2006, S. 119: Abb. 89). Arrows from the burial No. 6/1909 from Olbia

|       | Slovakia | Moravia | Dolenska group<br>Slovenia | Lusatian<br>culture | West Hallstatt |
|-------|----------|---------|----------------------------|---------------------|----------------|
| Ha C2 |          |         |                            |                     |                |
| Ha D1 |          |         |                            |                     |                |
| Ha D2 |          |         |                            |                     |                |

Fig. 5. Fibulae of Central Europe of the Late Hallstatt period (Gedl 2004; Hvala 2012; Mansfeld 1973; Novotná 2001; Říhovský 1993; Romsauer 1996)\*

\*The numbers correspond with the numbers in the catalogs (Říhovský 1993; Novotná 2001; Gedl 2004)

are not analogies (Hellmuth 2006, S. 120). This group is really rare. The analogies could be found again in the Northern Caucasus (burial No. 5 of the Nartan necropolis) (Fig. 4: C, 3) (Барчаев 1985, табл. 19, 23).

Trihedral arrowheads are widely known among the sets of the early Scythian time. Similar arrows, but with a tower-shaped head belong to the transitional period (Гречко 2016, с. 44—45) and are widely represented in the layers of the fortifications destruction.

To the above mentioned important clarifications, it is worth adding underestimated dating of the main complexes to the table 110 (Hellmuth 2006, S. 142). Burial No. 2 of Repiakhuvata Mohyla and, what is more significant, the complexes from Perebykivtsi (burial No. 2) and Novoaleksandrovka were dated by the second half of the VII c. BC. The last two burials occupy the next chronological level after the burial No. 2 of Repiakhuvata Mohyla<sup>9</sup>. Consequently, these complexes should have been

<sup>9</sup> Now burial No. 2 of Repiakhuvata Mohyla can be dated no earlier than the very end of the VII till the first quarter of the VI c. BC (Гречко 2012, с. 79).

located in the empty column of the first half of the VI c. BC in the table of Anna Hellmuth and not allow her to make the assault of the Smolenice-Molpir so old. This situation emphasizes the need for close cooperation of European specialists in studying problems that concern the regions with their own chronological schemes.

Anna Hellmuth rightly notes that the destruction of Smolenice-Molpir was a part of significant historical processes, and not internal conflicts of the period. The researcher relates this event to the time of the transition from Ha C2 to Ha D1 (second half of the VII c. BC) (Hellmuth 2006, S. 157).

For objective reasons, Anna Hellmuth could not get acquainted with the work of Anna Melukova, which was published in the same year (Мелюкова 2006). The leading researcher of Scythian weapons quite rightly pointed out several crucial moments.

Firstly, what is of fundamental importance, the set of arrowheads from Smolenice-Molpièr and Wicina differs significantly from the burial No. 2 of Repiakhuvata Mohyla and the classical Kelermes complexes that are synchronous to it.

Secondly, the researcher pointed to analogies in mound No. 2 in Perebykivtsi, agreeing with



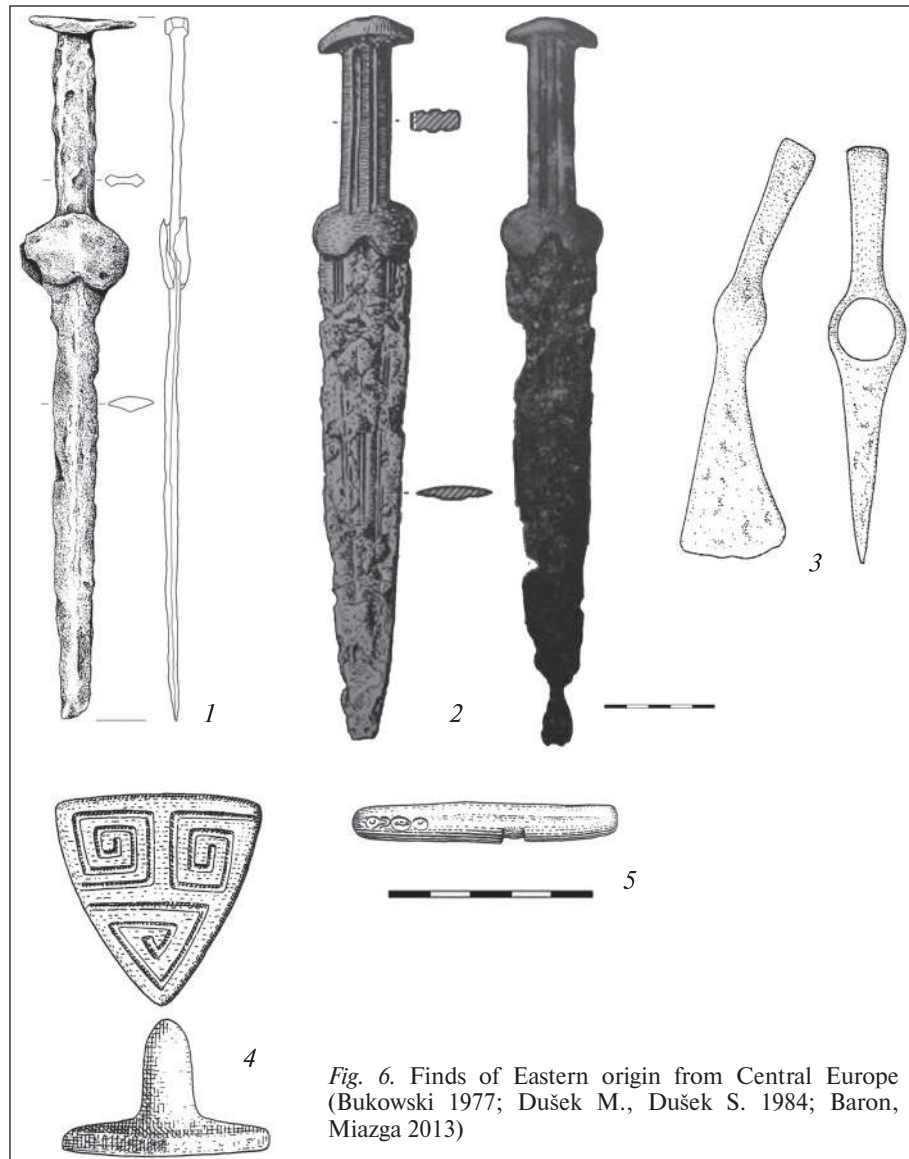


Fig. 6. Finds of Eastern origin from Central Europe (Bukowski 1977; Dušek M., Dušek S. 1984; Baron, Miazga 2013)

the dating of the complex by G. Smirnova to the second quarter-mid-VI c. BC (Смирнова 1993, с. 115—116).

Thirdly, that is extremely important, A. Melukova considered that the sets of arrows indicate that the destruction of the sites of ancient settlements in Wicina and Smolenice-Molpir in the first half of the VI c. BC was almost synchronous, assuming that it could be closer to the middle of the century (Мелюкова 2006, с. 28—29).

In addition, the researcher agreed with the release of two waves of Scythian expansion, but the gap was much smaller, as indicated by the identity of the sets of arrows from Wicina and Smolenice-Molpir. The first wave (the destruction of Smolenice-Molpir) could not be associated with the formation of the Transylvanian group, since it arose no later than the middle of the VII c. BC. The second wave, according to A. Melukova, is not

related to the formation of the Vekerzug culture, since it does not include synchronous arrowheads to those which were found in Wicina (Мелюкова 2006).

A little differently sees the situation I. Bruiako. The researcher relates the first wave to the formation of the Transylvanian group around the middle of the VII c. BC, and the second<sup>10</sup> coincides with the formation of the Vekerzug culture in Alföld (Брюяко 2005, с. 299). This approach is more consistent with archaeological data.

For reasons that are not completely clear to me, at the moment most of the researchers attribute the complexes of arrowheads from the layers of destruction in Central Europe to the chronological horizon of the burial No. 2 of Repiakhuvata Mohyla (Парциггер 1998, с. 104—115; Hellmuth

<sup>10</sup> It began with the destruction of Smolenice-Molpir.

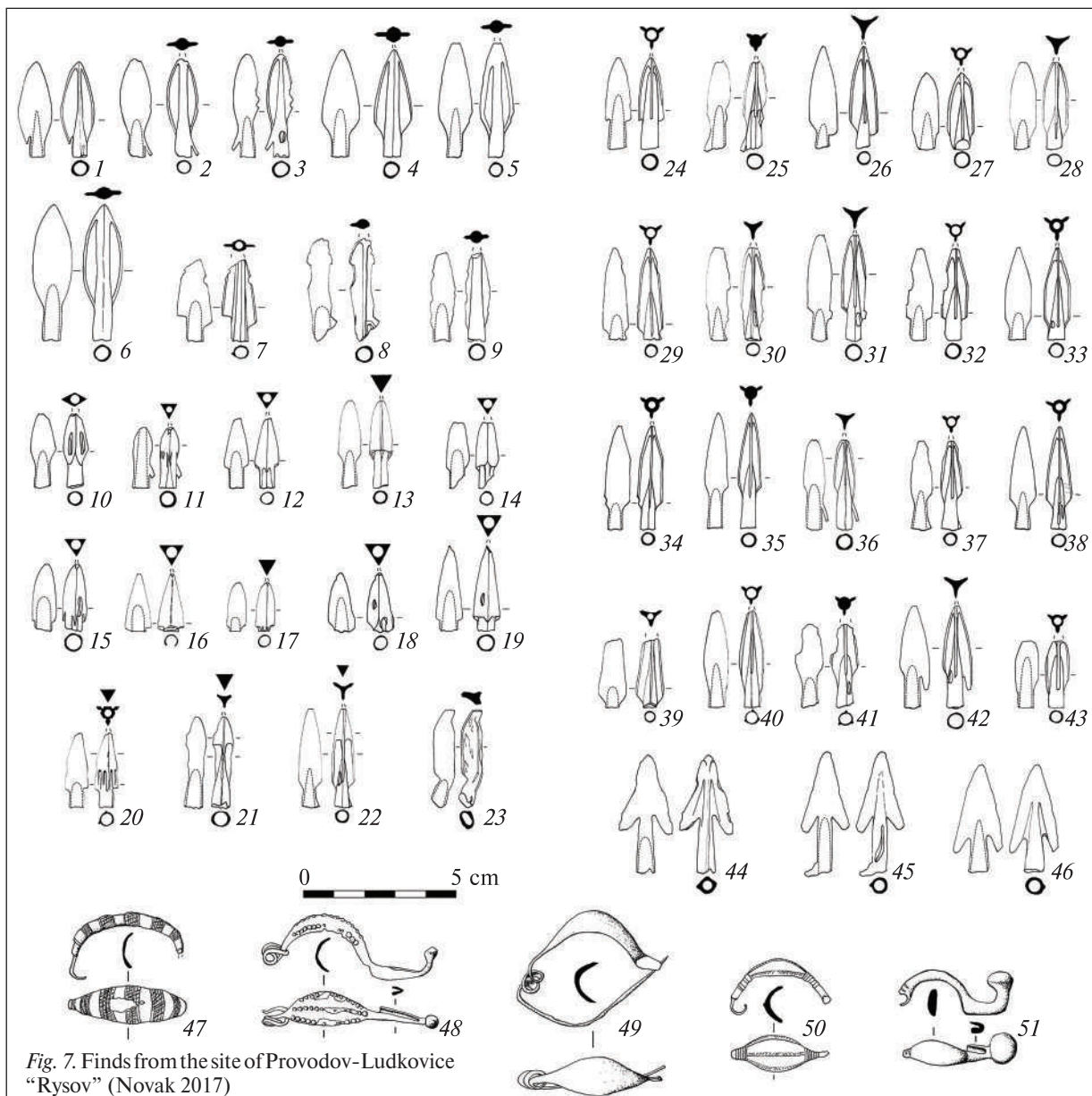


Fig. 7. Finds from the site of Provodov-Ludkovic "Rysov" (Novak 2017)

2006; Chochorowski 2014, s. 37). In this case, the massive availability of the II chronological group items A. I. Melukova does not explain. In this regard, it is worth considering on the dating of the quiver sets of the VI c. BC.

The arrowheads from the Smolenice-Molpir destruction layers (373 items) do not belong to the burial No. 2 of Repiakhuvata Mohyla horizon, but to the next one.

*Fibulae and other chronogocal markers.* M. Novotna, unfortunately, did not divide the fibulae from Smolenice-Molpir into separate chronological groups. The researcher often dated fibulae widely by Ha C2-D1, if they were found together in the same house (Novotna 2001, S. 78, 89).

Today, thanks to the absolute dating of a series of the complexes with boat fibulae (Kahnfibeln),

they are dated mostly by 620 BC <sup>11</sup>. The Stična burial No. 48/27 complex indicates the possibility of using these fibulae at the beginning of the Ha D1 together with the serpentine fibulae (Gabroves 2006, S. 292, Taf. 18; Egg, Kromer 2016, S. 83). The Šmarjeta type of the boat fibulae also belong to this time. These fibulae can refer to the Smolenice period 1 (Parzinger, Stegman-Rainar 1988, S. 166) and can be dated by the end of the HaC2 —

<sup>11</sup> In this paper, materials from the Kobarid necropolis were mainly analyzed (Teržan, Črešnar 2014, s. 716—718). It is impossible to exclude the usage of boat fibulae and somewhat later in the second half of the VII c. The dendrochronology from Mangdanenberg date back the beginning of the Ha D1 to around 616 BC. After 620 BC beginning of the HaD1a (Stična 2) is dated by M. Egg (Egg, Kromer 2016, S. 210).



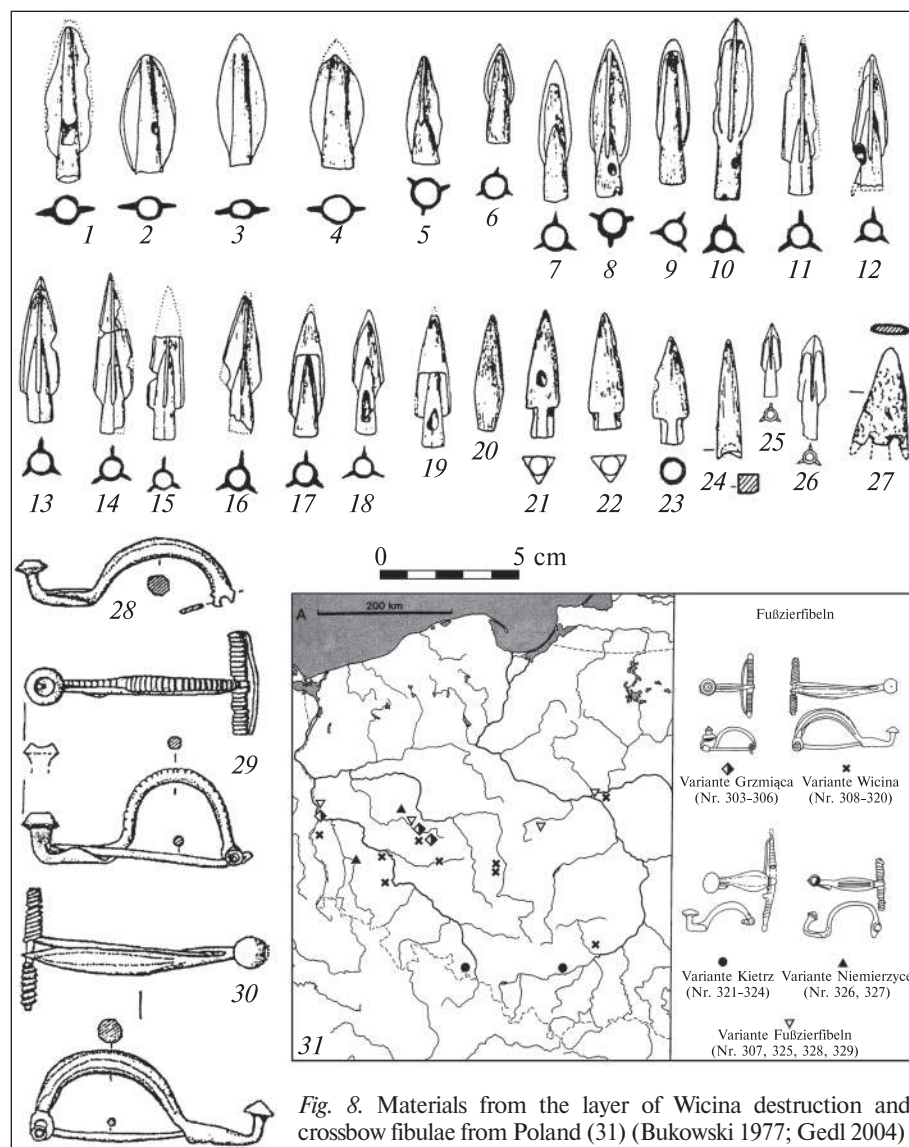


Fig. 8. Materials from the layer of Wicina destruction and crossbow fibulae from Poland (31) (Bukowski 1977; Gedl 2004)

beginning of the Ha D1. The boat fibulae from the horizon are irrelevant to the time of the destruction of the hillfort (Fig. 5).

Stage Ha D1 was characterized by the co-existence of the serpentine fibulae (S4 after G. Mansfeld) with different types of long-footed fibulae (Bogenfibeln) (Fig. 5; 9). There are no absolute dates for them, unfortunately. According to Biba Terzhan, the period of their existence was, in between the boat fibulae and horizon of the Certosa fibulae (between the middle of the VII c. BC and 555 BC) (Terzhan, Črešnar 2014, s. 716–718).

Serpentine fibulae (S4 after G. Mansfeld) from Smolenice-Molpir belong to variant VIIa after T. Hvala (Fig. 5). This variant of fibulae appears in the horizon Stična 2 (Hvala 2012, p. 242). In Slovakia, serpentine fibulae were found only in Smolenice-Molpir (Novotna 2001, S. 89).

A few boat fibulae are similar to those, which were found in Býči Skála Cave. These form of fibulae (form 2 and 3) H. Parzinger refers to the end of period 6 (Ha D1) – period 7a (Parzinger 1988), which corresponds to the time around the middle of the VI c. BC (Parzinger, Nevkrasil 1995, S. 179).

The analysis of the fibulae shows that the destruction of the ancient settlement could have happened not at the beginning of the stage Ha D1, but at its end (Fig. 5). Czech researchers include the finale of the Kalendenberg culture in south-western Slovakia at the beginning of the stage Ha D2 (around the middle of the VI c. BC) (Chytráček et al. 2017, s. 198–199).

Interestingly, that until now, researchers has not paid attention to the discovery of the clay pintadera from house No. 9 (Fig. 6: 4) (Dušek M., Dušek S. 1984, Taf. 68: 14). This is an important find that

| BC  | SouthWest Germany | Heuneburg                        | Kleinklein                     | Horakov                 | Kalendenberg  | Vekerzug              | Eastern Europe  |
|-----|-------------------|----------------------------------|--------------------------------|-------------------------|---------------|-----------------------|---|
| 650 | Ha C2             |                                  | HaC2 (Sticna 1)<br>Pommerkogel | middle phase<br>(Ha C2) | Ila           |                       | 1 phase Kelermes period   |
| 620 | Ha D1             | Magdalen-g                       | HaD1a (Sticna 2)               | young phase<br>(Ha D1)  |               |                       | 2 phase Kelermes period   |
| 600 |                   | IVc                              | HaD1b (S4 hor.)<br>Krollkogel  |                         | IIb           |                       |   |
| 550 | HaD2              | IVb<br>IVa<br>IIIb<br>IIIa<br>II | ?<br>HaD2 ( Certosa)           | late phase<br>(Ha D2)   | III (Ha D2-3) | hor. GMD*<br>older VK | Transitional period<br>Vitova Mogila horizon<br>Middle Scythian horizon<br>horizont phase 1 |
| 500 | HaD3              | I                                | HaD3                           | final phase<br>(Ha D3)  |               | late VK               |   |

Fig. 9. The variant of local chronological schemes synchronization (VI c. BC)

\* horizon GMD (Gyöngyös–Miskolc, Diósgyőr) after I. Bruyako

helps to associate participants of the destruction of the sites in Central Europe with the appearance of the Vekerzug culture more confidently. Other pintaderas were found in the complexes, which are dated later than the middle of the VI c. BC. This does not allow separating the destruction of Smolenice-Molpir from this chronological boundary.

Dendrochronological data from Smolenice-Molpir is also important. Recently, studies of wood from the cistern of the settlement were carried out. For sample SMOL\_W\_1, the dendrodate is defined as 605–585 den BC, and taking into account the lost fragments, possibly later (Barta et al. 2017, s. 535).

Thus, the dendrodate from Smolenice-Molpir cistern, indicate that the settlement could have been destroyed after 585 BC. Arrowheads belong to the transitional period (second – beginning of the third quarter of the VI c. BC. Latest fibulae could be dated for the end of the HaD1 stage (around the middle of the VI c. BC).

In the recent years, information about the traces of the assault of the **Dédestapolcsány–Verebce-bérc** site in the North-Eastern Hungary has appeared (Szabó, Czajlik, Reményi 2014). The fortification has an area of 123 hectares and was one of the centers of the local population, since Late Bronze Age (Kyjatice culture). At the entrance to the settlement, in fortifications 234 arrowheads were found (Fig. 4: D). These are similar to those, which were found in Smolenice-Molpir. In this case, it is worth noting seven three-winged arrowheads with

a weakly protruding socket close, but not identical variant of II. 4 B.a, after A. Hellmuth. They are also known among the arrows which were found at the settlement Provodov-Ludkovice „Rysov” in Moravia (Novák 2017, s. 226, tab. 3, 4, 16). Among the photos there is an arrowhead close to variant II. 4.G.a (Fig. 4: D). These arrowheads are already towards the Vitova Mohyla horizon (the third quarter of the VI c. BC). Taking into account the fact that all other data gives us too much of the terminus *post quem* date, it cannot be ruled out that the transition of nomads through the Carpathians occurred in the second quarter-middle<sup>12</sup> of the VI c. BC.

Appearance and further movements of the nomads can be marked by complexes with tops of funeral carts and bells, which Jan Chochorowski correlates with the late phase of the Mezőcsát culture (Chochorowski 1987, s. 165). This horizon in the Carpathian Basin could be associated with the complexes of the Eastern European Forest-Steppe (Völkivtsi, Hladkivshchyna, Kotsiubynchyky 2). I. Bruyako rightly notes that the complexes of the horizon GMD (Gyöngyös- Miskolc, Diósgyőr) do not belong to the Mezőcsát culture, but to the Vekerzug one (Fig. 9). The period between the Mezőcsát culture and the GMD horizon in Alföld is a “white spot” (Бруяко 2005, с. 283, 286).

<sup>12</sup> We can not exclude the time closer to the middle of the VI c. BC.

Interestingly, all these complexes are represented by “hoards”, which is very similar to the situation with the “strange complexes” of the Hellenistic period in the Northern Black Sea region. It cannot be ruled out that we are dealing with a peculiar form of nomad’s cenotaphs. Their creation could be due to the fact that the nomads were on the march on the territory of the enemy and the creation of traditional burial structures was not possible.

**Horakov culture.** The number of locations of arrowheads of the transitional period has significantly increased recently. Currently we can talk about 11 points in Bohemia and 20 points in Moravia (Bartík et al. 2017; Novak 2017). Among these objects Horakov “Horakovskiy hrad” (26 arrowheads), Křenovice hillfort (19 arrowheads) stand out. The site of Provodov-Ludkovice “Rysov” stands apart, which has already been named the “Moravian Molpière”. 46 arrowheads and several fibulae were found at the settlement<sup>13</sup> (Fig. 7) (Novak 2017).

M. Golec dates a decline of Horákov and Platěnice cultures in Moravia to the early stage of Ha D2 (horizon 7a, after H. Parzinger) (Fig. 9) and relates this phenomenon with the expansion (military expeditions) of Vekerzug or other Eastern cultures (Topal, Golec 2017, p. 17).

**Lusatian culture.** Probably, after a certain period of time spent in Moravia, nomadic groups moved towards the Moravian Gate (Chochorowski 2014, s. 32). This strategic point was controlled by the population of Lusatian culture. The Štramberk Čertova díra hillfort has assault traces (fired fortifications, 16 arrowheads). Part of the Amber Road through the Moravian Gate after these events was not used for a certain period of time, and moves to the west into Bohemia (Chytráček et al. 2017, s. 199).

After overcoming the mountain passes, nomads turned up in Upper Silesia and further penetrated to the Oder basin (Sobotka “Sleza”, Strzegom, Wicina) and up to the Vistula (Kamienec, Kruszwica) (Chochorowski 2014, s. 32).

A special place in the study of nomadic campaign into the Lusatian lands belongs to the Wicina hillfort at the Oder (Chochorowski 2014, s. 37–43). The materials of the hillfort studying are well-known, but haven’t been published yet. In recent years, the dendrodates of the construction and repair of wooden fortifications have become

<sup>13</sup> Only two cross-shaped fibulae are known in Moravia (Rihovski 1993, S. 190–191). Unfortunately, the context of all the finds does not allow specifying the dating of this type of fibulae for this territory. At the territory of Slovakia, only one fibula is known, which can be referred to this type (Novotna 2001, S. 266).

known. It became clear that the settlement was built after 737/736 BC, underwent reconstruction after 587/586 BC and was destroyed after 571 BC (Krapiec, Szychowska-Krapiec 2013, s. 373–374).

Arrowheads from the layers of destruction do not differ from those which were found in other destroyed settlements and belong to the transitional period (Fig. 8: 13–19, 25–26).

The crossbow fibulae (Fusszierfibeln, F2, after G. Manfeld) were dated by the HaD3 (Chochorowski 2014, s. 37). These fibulae are important for dating the destruction of this hillfort. Until today, most of the researchers date them by the end of the VI — beginning of the V c. BC (Брюяко 2005, с. 301–303), or by 520–510 BC (Chochorowski 2014, s. 41). The researchers were puzzled by the types of arrowheads that could not be dated by such a late time. There were various explanations for this. Search of the nomads, who used outdated weapons was ineffectual. A little decreased the contradictions the chronology by M. Trachsel (Trachsel 2004), due to which the phase HaD3 is dated by the 570/560–520/510 BC. Accordingly, these fibulae were a little “ancientized” (520/510 BC), remaining in the HaD3 (Chochorowski 2014, s. 37). Recently, J. Chochorowski, based on the totality of the data, transmitted the destruction of the fortification no later than 560 BC (570/560 BC) (Хохоровски 2019, с. 229).

The dating of the end of the Wicina functioning is of great importance to clarify the dating of the crossbow fibulae appearance. In contrast to the Eastern Hallstatt region, the crossbow fibulae, were very popular in the area of Lusatian and Pomeranian cultures (Fig. 8: 31). Probably, it is possible to assume the local form of fibulae of the Lusatian and Pomeranian tribes in the VI c. BC, which appeared on the basis of Western imported samples (Gedl 2004, s. 110–111).

Crossbow fibulae (F2, after G. Manfeld, variant Wicina, after M. Gedl) come in chronological scale after boat fibulae (Kahnfibeln mit aufgebogenem fessende) (Fig. 5). This type of boat fibulae P. Romsauer correlates with the horizon of long-footed (Bogenfibeln) ones, which were found in Smolenice-Molpir and Sopron (Romsauer 1996), which can mark the time of destruction of the settlement.

An interesting series of transitional forms of fibulae, which reflects the occurrence of the crossbow spring and the transformation of the bow shape (Fig. 5: 288). Boat fibulae (Kahnfibeln mit aufgebogenem fessende) were found in cremations of Pomeranian culture (Gedl 2004, S. 288). M. Gedl dated her widely by the Ha D. The boat



fibula with a non-ornamented biconical foot, a small spring and a bow like Šmarjeta type fibulae was found in Rysově (Moravia) (Fig. 7: 48) (Novak 2017, s. 195–196.). A similar fibula was found in Býči Skála Cave with materials of the first half of the VI c. BC. H. Parzinger carried it to the horizon 7 b/c (late Ha D2) (Parzinger, Nevkrasil 1995, S. 179)<sup>14</sup>. These fibulae differ from crossbow fibulae (Fusszierfibeln; F2; variant Wicina, after M. Gedl) only by boat bow.

The entire series of the boat fibulae (Kahnfibeln mit aufgebogenem fussende) is known in the Lusatian culture at the Oder basin and in Moravia (Fig. 5; 8: 31) (Gedl 2004). All of them have a crossbow spring, and some of them — a foot with a conical protrusion (N 279, 280). M. Gedl dated them widely by the Ha D (Gedl 2004, S. 100), judging by tab. 118 — to the first half of the period. There are analogies in the Hallstatt burial ground (burial No. 267) (Kromer 1959, Taf. 40, 10) and in the Western Hallstatt region (five items in total) (Glounz 1997, S. 189, map 29).

It can be assumed that the crossbow scheme of the spring, which is unknown at the beginning of the VI c. BC in the Eastern Hallstatt area and Italy, came to the Lusatian tribes from the Western Hallstatt region (Gedl 2004, S. 110–111). After that it became a local shape of the region<sup>15</sup>. This series of transitional forms of boat fibulae can relate to the final of the Ha D1 — the beginning of the Ha D 2 (around the second quarter — middle of the VI c. BC) and correspond to the time of the nomadic campaign beginning.

It is worth noting that, despite a significant number of the crossbow fibulae finds in the burial grounds of the Lusatian and Pomeranian cultures, the lack of reliable chronological indicators makes them difficult to date. Radiocarbon dating of the burial of the 1801 Kietzu burial ground did not meet expectations (274+/- 90 BC) (Chochorowski 2007, s. 127).

The first crossbow fibulae (F2, variant Wicina) began to be used in the end of the HaD1 — beginning of the HA D2 stages, and not the HaD3 as it was previously thought (Fig. 5).

In the area near Wicina, settlements were not created after the military catastrophe, and the ancient settlements in this region ceased to exist

simultaneously (Хохоровски 1994, с. 53). A similar phenomenon is observed for the territory of Upper Silesia, the north of the Moravian Gate (HaD2–HaD3) (Хохоровски 2013, с. 66). Two daggers from Silesia could be related with the nomad campaign (Lignica and Łubnice (Fig. 6: 1–2) (Bukowski 1977; Baron, Miazga 2013). The connection between the Vetersfelde Treasure and the destruction of Wicina does not seem to me obvious.

Thus, I can conclude that the arrowheads from the layers of destruction of fortifications in Central Europe certainly belong to the transitional period (Fig. 9). At the moment we can talk about the time around 570/560–540 BC for these events, and not about the turn of the VII–VI c. BC, and certainly not about the second half of the VII c. BC. The materials from Central Europe, which can be associated with the military activity of nomads from the east, can be dated to the narrow chronological period around the middle of the VI c. BC. Today, the identification of two raids of nomads, which were separated by a century, does not seem convincing.

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<sup>14</sup> The refinement of the dating of such fibulae for the Eastern Hallstatt region and the Lusatian culture within the periods of HaD1–HaD2 is a task for the future.

<sup>15</sup> Various long-footed fibulae (B1-2, after G. Mansfeld) also have similar springs and not typical for more early items spirals (Gedl 2004, N 267–274, 266–267).

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#### ПРО ДАТУВАННЯ НАКОНЕЧНИКІВ СКІФСЬКОГО ТИПУ ПІЗНЬОГАЛЬШТАТСЬКОГО ПЕРІОДУ З ЦЕНТРАЛЬНОЇ ЄВРОПИ

Сліди «скіфських набігів» в Центральній Європі загальновідомі. Ці події не знайшли свого відображення у письмових джерелах, тому на даний момент існують серйозні розбіжності у трактуванні і датуванні матеріалів східного походження з Центральної Європи.

Наконечники стріл з шарів руйнувань городищ Центральної Європи (Смоленіце-Мольпір, Віцина та ін.), безумовно, займають більш пізню хронологічну позицію стосовно комплексу впускного поховання Реп'яхуватої Могили. Набори в повній мірі відповідають перехідному періоду (друга — початок третьої чвертей VI ст. до н. е.). Датування цих наборів стріл з Центральної Європи другою половиною VII — початком VI ст. до н. е. не може бути прийнятим. Наконечники стріл з шарів руйнувань не використовувалися в регіоні до вторгнення кочівників (На С2-D1). Вони є чужорідним елементом в центрально-європейському регіоні і можуть служити надійним хронологічним маркером.

Подібному датуванню не суперечать і інші хронологічні індикатори. Аналіз фібул городища Смоленіце-Мольпір показує, що його руйнування могло статися не на початку фази На D 1, як вважалося раніше, а в самому її кінці. Руйнування городища Віцина відбулося після 571 р до н. е., не пізніше 560 р. до н. е. На сьогодні є підстави припускати широке поширення арбалетовідних фібул (Fusszierfibeln) на території лужицької та поморської культур вже з другої чверті — середини VI ст. до н. е. (кінець періоду На D1 — початок На D2), а не періоду На D3. Це датування, а також ідентичність наконечників стріл знахідкам зі Смоленіце-Мольпір, дозволяють не тільки не виділяти руйнування Віцини в другу хвилю «скіфських» набігів кінця VI ст. до н. е., а й поставити під сумнів столітній розрив між двома вторгненнями номадів до Центральної Європи.

*Ключові слова:* Центральна Європа, пізньогальштатський період, НаD, кочівники, наконечники стріл, фібули.

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#### О ДАТИРОВКЕ НАКОНЕЧНИКОВ СКИФСКОГО ТИПА ПОЗДНЕГАЛЬШТАТСКОГО ПЕРИОДА ИЗ ЦЕНТРАЛЬНОЙ ЕВРОПЫ

Следы «скифских набегов» в Центральной Европе общеизвестны. Данные события не нашли своего отражения в письменных источниках, поэтому на данный момент существуют серьезные разногласия в трактовке и датировке материалов восточного происхождения из Центральной Европы.

Наконечники стрел из слоев разрушений городищ Центральной Европе (Смоленце, Вицина и др.), безусловно, занимают более позднюю хронологическую позицию по отношению к комплексу впускного погребения Репяховатой Могилы. Наборы в полной мере соответствуют переходному периоду (вторая — начало третьей четвертей VI в. до н. э.). Датировка данных наборов стрел из Центральной Европы второй половиной VII — началом VI вв. до н. э. не может быть принята. Наконечники стрел из слоев разрушений не использовались в регионе до вторжения кочевников (На С2- D1). Они являются чужеродным элементом в центральноевропейском регионе и могут служить надежным хронологическим маркером.



Подобной датировке не противоречат и другие хронологические индикаторы. Анализ фибул городища Смоленице-Мольпир показывает, что его разрушение могло произойти не в начале фазы Ha D 1, как считалось ранее, а в самом ее конце. Разрушение городища Вицина произошло после 571 г. до н. э., не позднее 560 г. до н. э. На сегодня есть основания предполагать широкое распространение арбалетовидных фибул (Fusszierfibeln) на территории лужицкой и поморской культур уже со второй четверти-середины VI в. до н.э. (конец периода Ha D1 — начало Ha D 2), а не периода Ha D3. Данная датировка, а также идентичность наконечников стрел находкам из Смоленице-Мольпир, позволяют не только не выделять разрушение Вицины во вторую волну «скифских» набегов конца VI в. до н. э., но и поставить под сомнение столетний разрыв между двумя вторжениями номадов в Центральную Европу.

*К л ю ч е в ы е с л о в а:* Центральная Европа, позднегалльитатский период, HaD, кочевники, наконечники стрел, фибулы.

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