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ZBIGNIEW BUKOWSKI

ABOUT SO-CALLED PRE-SCYTHIAN TRACES IN THE AREA OF LUSATIAN CULTURE

The inhabitants of Central Europe were subjected to a sequence of essential changes during the turn of subperiods Hallstatt B and C that fell to the end of the 8th and beginning of the 7th centuries B.C. The role of the so-called Transylvanian circle, understood to have included an important part of the Carpathian Basin, had certainly diminished then, while the Alpine culture began to assume the essential significance. Alterations of the culture aspekt spread over a large part of Middle Europe, should be inquired in view of strong southern and western ascendancies and, independently of these, of influences coming from the east. This process was accompanied in both cases, besides culture influences, also by the displacement of strange ethnic groups.

The consequence of these factors was the substitution of the local groups of "Urnfield" Culture in the middle Danube Basin, by Barrow-grave cultures, having a clear western (or West-Alpine stamp) and proto-Celtic character. Also the southern East-Alpine circle displayed distinct culture and ethnic bonds with an early-Illyrian environment. These alterations cannot be exclusively viewed as the result of internal changes. The role of a strange ethnic-and-culture factor becomes ever more clear, although the very mechanism of that process is still a subject of discussion. In the nearest neighbourhood of Lusatian Culture, over the area of South Moravia and West Bohemia, two cultures, well formed since HaB/C: Bylany and Horákov, display clear connections with the early Celtic *"milieu,"* and in their carriers, should certainly be perceptible ethnic elements of that character. In South Moravia and South-West Slovakia appears Kalenderberg Culture (called also Statzendorf-Gemeinlebarn), certainly of a North-Illyrian character. Eastwards from these, particularly in the Great Hungarian Plain, in Transylvania and the regions adjacent from the east and north-east, there rise groups of a distinctly north-Thracian Culture, although their Thracian ethnic character fails so far to be proved. It is just in their

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compass, that we notice the strongest eastern influence, which is the subject of this article. The border between western and eastern groups over the area of Central Europe generally follows the lower course of the river Vah and the Meridian Danube, which steps over that line westwards only to a slight distance.

Whereas, the whole area of Lusatian Culture in its western and southern zones i.e. the territories lying closest to the Central European territory submitted to the above-mentioned changes, has certainly resisted them. This fact may be reckoned as the specific development of groups determined by the name of "Lusatian Culture groups" in distinction to the circle of "Urnfield" groups. Substantiating this more in detail, I claimed in my book the necessity to distinguish this culture as an independent group, displaying a different genetic and development process during all the time of its existence, i.e. from the 14th to the 4th centuries, B.C.[1]

I wish to devote the following remarks to the problem of eastern influence, acting between the 8th and the end of the 7th centuries, B.C. (that is HaB 3 — HaC 1), determined in older literature by the name of "Thraco-Cirmmerian" and more recently "Pre-Scythian." It is to be noticed that the above terms used formerly to be identified with the mentioned ethnoses. The definition "Pre-Scythian" is understood in this article not in the sense of ethnic status of their creators and producers, but in order to determine a standing out chronological phase of finds appearing in the area of Lusatian Culture and in other parts of Middle Europe (particularly the Carpathian Basin), objects of eastern origin, or their local (especially "Carpathian") imitations. On the further pages of this article I endeavour to substantiate my opinion on the impossibility of connecting so-called Pre-Scythian findings with historical peoples inhabiting South-Eastern Europe, particularly with the Cimmerians.

I accept the range of Lusatian Culture for the turn of HaB and C, according to the map elaborated for this phase and which is completed by V. Podborsky's recent corrections, for the borderline of Moravia Culture touching the Podolia * Culture.[2]

Polish archaeological literature has not given much attention to the character and the importance of the eastern influences, due to the knowledge only of single finds of that type in the range of Lusatian Culture. T. Sulimirski[3] connected them with the so-called Thraco-Cimmerian phase (*"thrako-kimmerische Periode"*), treating them

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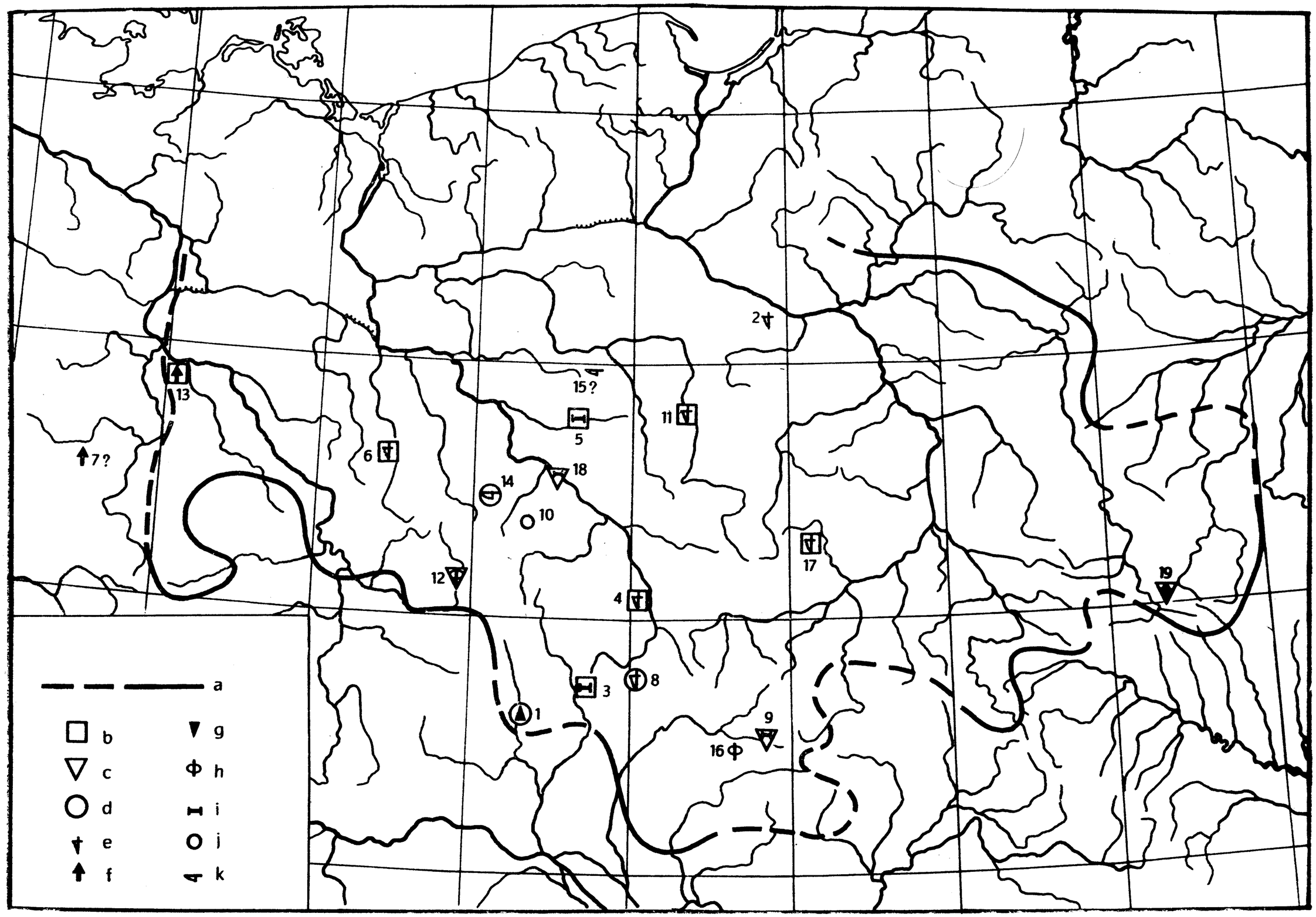
* In the article Russian geographical names have been transcribed phonetically while the names of the authors and their works have been transliterated.



Map. The range of the so-called Pre-Scythian and other "eastern" finds in the area of the Lusatian Culture, from the 8th to the 7th/6th centuries B.C. (after Z. Bukowski)

1. Brno-Obřány, South Moravia, CSSR; 2. Czermno (?), Płock Voivodship, Poland; 3. Černotín, Dist. of Přerov, Moravia, CSSR; 4. Gamów, Katowice Voivodship, Poland; 5. Karmin, Wałbrzych Voivodship, Poland; 6. Klein Neundorf, Kr. Görlitz, GDR; 7. Klein Runderstedt (?), Kr. Erfurt, GDR; 8. Kotouč-Štramberk, Dist. of Nový Jičín, Moravia, CSSR; 9. Liptov region, North Slovakia, CSSR; 10. Miecznikowo, Wałbrzych Voivodship, Poland; 11. Přeměříce, Dist. of Hradec Králové, East Bohemia, CSSR; 12. Podrybnice, Sieradz Voivodship, Ponad; 13. Quellendorf, Kr. Köthen, Anhalt, GDR; 14. Strzegom, Wrocław Voivodship, Poland; 15. Śmiełów (?), Kalisz Voivodship, Poland; 16. Turiec-the neigbourhood, Middle Slovakia, CSSR; 17. Wojciechowice, Kielce Voivodship, Poland; 18. Wrocław-Wojszyce, Poland; 19. Vysotskoye, reg. Zabolotov, dist, of Lvov, U.S.S.R.

Gloss to the Legend:

a — border of Lusatian Culture in HaC
b — hoard
c — grave
d — settlement
e — dagger
f — spear-head
g — bone arrow-head
h — "skipetar" battle-axe
i — part of the horse harness
j — golden bracelet
k — Siberian type knife

as the result of culture acting and exchange, and judging the infiltration of Cimmerians as to have played only an ulterior role. Therefore other investigators determined those objects to be "Thracian," excluding here the possibility of Cimmerians' influence.[4]

Quite differently sprang up the situation in the range of the Carpathian area, starting, it is true, from a larger material basis. Attention was drawn already in the thirties of our century to assemblages and loose findings, determined as Thraco-Cimmerian. I. Nestor was one of the first to declare their connection with the Cimmerians and with the raids of their tribes over the Carpathian Dale (*"durch die grosse Erschütterung, welche die Kimmerier-Bewegung mit sich brachte"*).[5] This point of view was then supported by many archaeologists (e.g. L. Franz, K. Willvonseder) specially in the "Wiener Prähistorische Zeitschrift" (1932—1934), mostly in connection with the discovery of the bronze hoard at Stillfried a. March (Lower Austria), and also with other findings, among them the set of Kisköszeg (Hungary). A considerable amount of finds being no doubt of eastern origin, including especially grave inventories and hoards, allowed S. Gallus and T. Horváth to elaborate their large monograph.[6] The authors in a convincing way presented the indisputable fact of infiltration of strange ethnic elements from the east in the 8th and second half of the 7th centuries B.C. (i.e. HaB 3 and the beginning of HaC). They were said to have been most probably groups of historical Cimmerians, moving into the Carpathian Basin. Both these investigators have also drawn attention to the necessity of seeking analogies for many findings of this group in the area of Kuban and North Subcaucasus, as well as in Central Asia.

Findings (sets) and relics then determined as Thraco-Cimmerian, in the area of Central Europe, appeared mostly in the basin of the upper Dniester, in the Carpathian Basin (especially the Great Hungarian Plain), in large amounts over the Balkans (Bulgaria, Yugoslavia), and sporadically also in the Alpine region. They mostly included parts of the horse harness (knobs, so-called *Phalere,* etc.), less frequently weapons and only seldom clothes ornaments. At this stage of research it was accepted, that owing to Cimmerians shifting westward in the 8th and 7th centuries B.C., has been formed here a specific mixed culture, which was also given the name of "Thraco-Cimmerian," described by the chronological terms "period" or "horizon." This culture was understood to have been the consequence of mixing of the inflowing "Cimmerian" population with the local (mostly Thracian) tribes.

However, already then attention was drawn to the necessity of distinguishing exactly "Cimmerian" findings from others that were

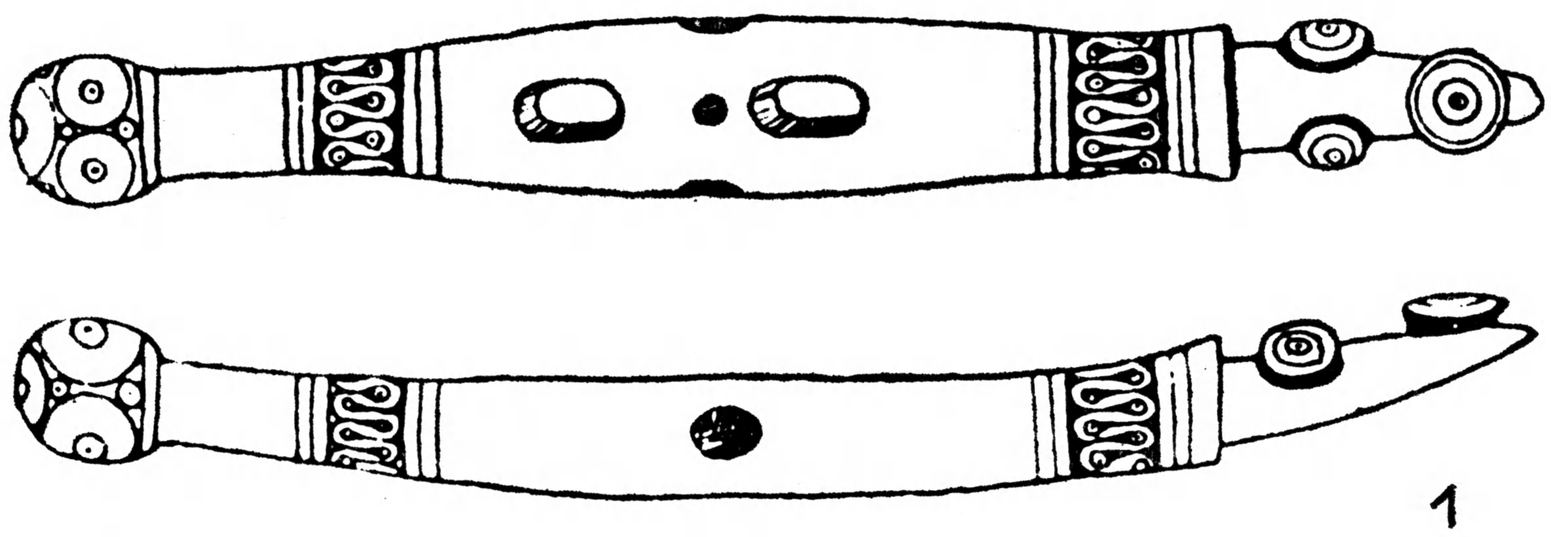
undoubtedly of local, Middle-Danubian origin, placed till now in the category of the so-called Thraco-Cimmerian relics. This concerned first of all parts of horse harnesses, especially elements of bits (therein the so-called tourniquets and harness ornaments, among others *Phalere*). The first to question the possibility of associating these finds with Cimmerians was F. Holste,[7] who indicated that at the time when that type of objects had appeared in Central Europe (8th cent. B.C.), there had occurred a certain cultural turn as well as the beginning of Hallstatt period — understood as the early iron age. He therefore decided that those findings are an important chronological determinant for the transitory phase from HaB to HaC: "*Die bekannte kimmerische Fundgruppe, namentlich charakterisiert durch Pferdegeschirrbronzen, trifft noch mit unserem B-Horizont zusammen, und es ist die Annahme verlockend, dass der Einbruch dieser Gruppe der Anlass für die Niederlegung der B-Depots war.*" He next further adds that: [...] "*die B-Kultur in einem fortgeschrittenen Stadium von der kimmerischen Welle getroffen wird.*" [8]

It is, however only A. A. Iessen's [9] detailed elaboration concerning the northern coast of the Black Sea ("North Pontic") and the Causasus, as well as G. Kossack's paper,[10] dealing with Europe's Danubian area, that have proved a different origin of parts of a disclosed horse harness, particularly the cheek-pieces of bronze (*"Seitenstangen der Pferdetrensen"*). It was possible to distinguish here relics of undoubtedly eastern origin and determined to be Pre-Scythian, from those found in the Danube area and named "Thraco-Cimmerian."

We shall come back to the hypothetical Cimmerians' raid onto the area of the Carpathian Basin in the further part of the present article. Whereas here we shall emphasize the fact, that in spite of both the mentioned authors having distinguished the two different groups of findings, hypotheses supporting the connection of "Thraco-Cimmerian" finds with Cimmerians, continued to be frequent. We should particularly mention S. Foltiny's remarks, who judged them to be traces of nomad Pre-Scythian horsemen, shifting in from the east in the second half of the 8th century B. C. in two directions: 1 — through the Carpathian Dale and Serbia up to Macedonia, and 2 — through Western Hungary and the Eastern Alps as far as North Italy.[11] This point of view is still repeated in quite recent literature,[12] though in a less categorical form.

In the light of the hitherto research and the knowledge of Pre-Scythian or Thraco-Cimmerian materials from the range of Lusatian culture, there appears the necessity of distinguishing among them scarce, but very characteristic relics calling for a far earlier dating.

I mean here a bone cheek-piece from the locality of Bełz, region of Sokal (U.S.S.R.) (fig. 1) and three daggers of Sosnova Maza type, discovered in the Rożubowice locality and at Jarosław, Przemyśl Voivodship and at the very Przemyśl (fig. 2—4). Relics of that type had been till now recognized as Cimmerian; in the light of the most recent accessible analogies they were connected with the culture zone of Sabatinovka-Noua phase (Srubna Culture circle), and they ough to be



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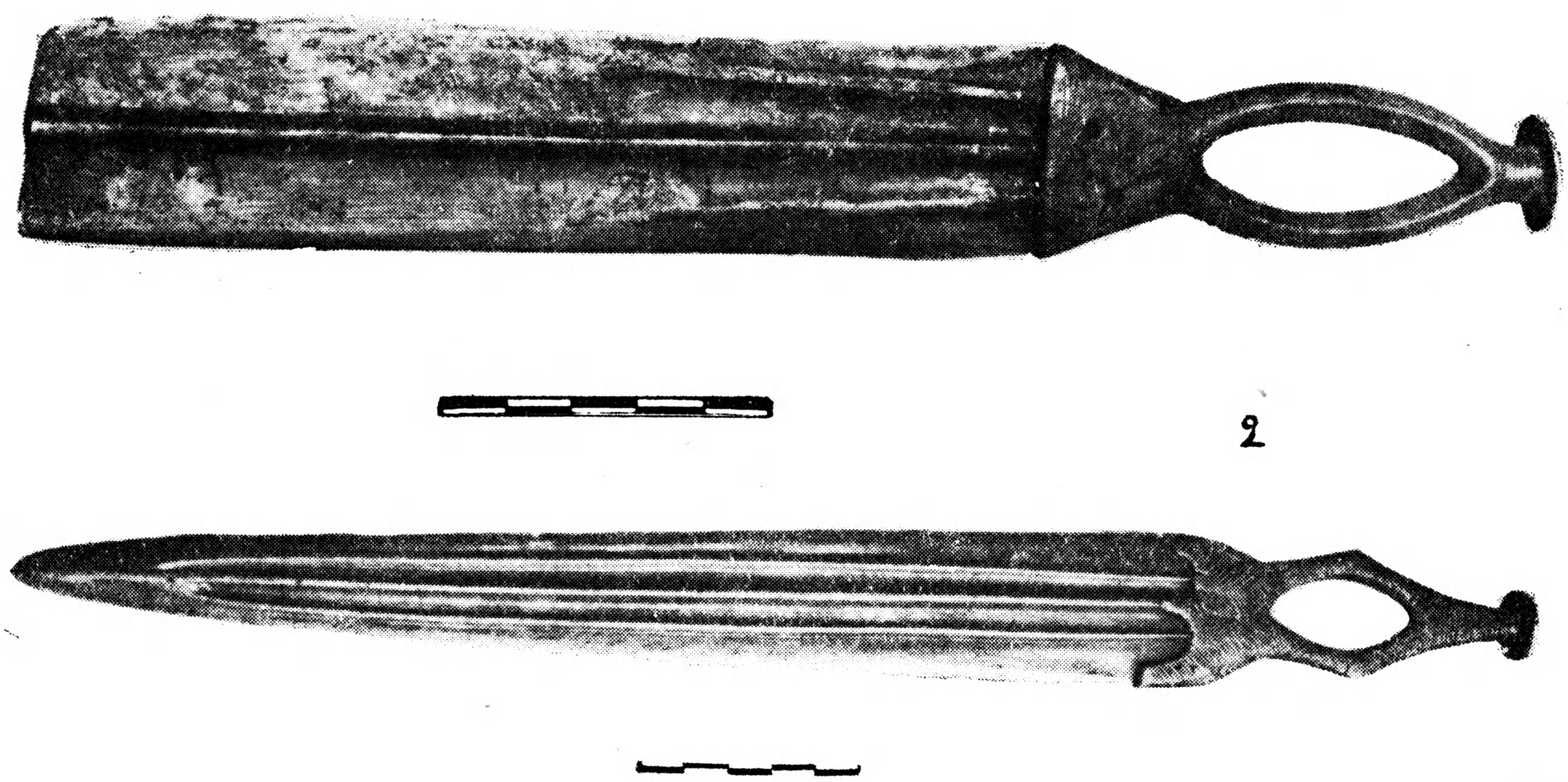

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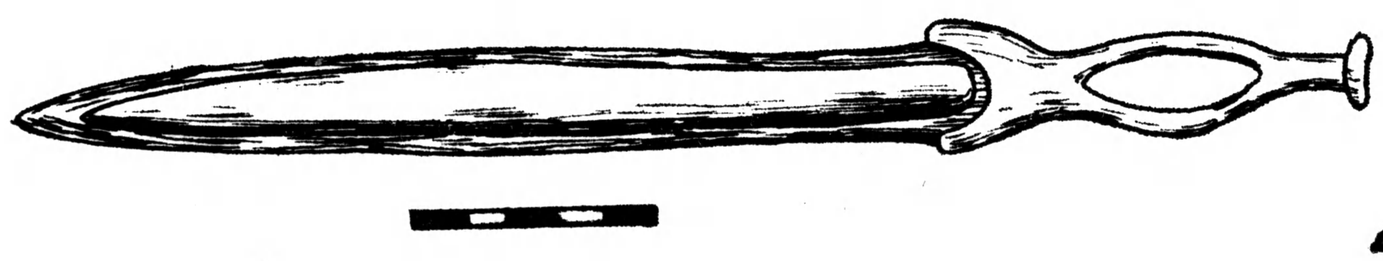

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Figs. 1—4. Relics from the 13th-12th centuries B.C. connected by their origin with Sabatinovka-Noua Culture complex

1. Bełz, reg. Sokal, U.S.S.R. Bone cheek-piece, after L. Kozłowski; 2.—4. Bronze daggers of the Sosnova Maza type 2. Jarosław, Przemyśl Voivodship, after Z. Bukowski; 3. Przemyśl, after Z. Bukowski; 4. Rożubowice, Przemyśl (?) Voivodship, after T. Sulimirski

dated to the 13th-12th centuries B.C. and thus crossed out from the register of "Pre-Scythian" findings.[13]

The cheek-piece of Bełz has close analogies in the culture set of Noua, while its ornament indicates the necessity of analizing it in the context of materials connected with the Mycenaean influence on the Carpathian Basin in the 1500—1250 B.C. period, although it is rather a local Carpathian product. In relation to the origin of this object, T. Sulimirski [14] expressed the following opinion: "[...] they seem to reflect rather close connection with the Danubian area, than a direct impact of the Mycenaean culture." Notwithstanding strong, "Mycenaean" elements, particularly in Mad'arovce and Otomani Cultures in Slovakia and the type Veterov in Moravia,[15] the local Carpathian origin of the Bełz specimen should be accepted, together with some ties with the forms of the Borias type, although certain analogies can be found in Moldavia, too.

All three daggers of Sosnova Maza type, dated by their analogies to the 13th-12th centuries B.C., have been revealed in the same region, over the middle course of the river San. This fact, as well as some differences in ornamentation of the hilts, not observed in other specimens of the type mentioned, or in the related Krasniy Mayak type, require some completion. They indicate the possibility of Srubna Culture, or of Noua Culture related to the former, acting to the west. As far as the specimen from Rożubowice is a close imitation of eastern models, the other two (from Jarosław and Przemyśl) show differences in respect to their prototypes. At the same time they allow for a hypothesis that in this region there must have been a casting house, connected with the population of the Sabatinovka-Noua phase, or that from that circle came to the middle San valley wandering specialists-founders.

The dating back of the daggers of Sosnova Maza type from over the San to the 8th-7th centuries B.C., (Byelogrudovka Culture), as was recently accepted by J. Dąbrowski,[16] ought to be corrected: we should rather connect them with the complex of Srubna-Noua Culture, receding to the far earlier period (13th-12th centuries B.C.), joining them rather to the Srubna Culture.

If hitherto stage of research into the culture sets and therewith connected settlements along the middle rivers Dniester, Dnieper and Prut in the 13th-12th centuries B.C. (i.e. about BD — HaA 1) can be reckoned to be a sufficient base for conclusions, the presence of all the four finds should be considered in the context of the Noua Culture settlement effect on the middle San basin, in the Przemyśl-Rzeszów region, which seems to be very probable. The penetration of settlers

there seems to be confirmed by recent discoveries within a Lusatian Culture cemetery at Paluchy, Przemyśl Voivodeship. Among the graves of its oldest phase, dated to the Bronze Age III—IV, have been disclosed materials related to findings of Noua Culture BD or perhaps HaA 1.[17] The fact of the existence of graves containing mixed types of — Noua and early Lusatian — pottery, seems to confirm the possibility of a mixed settlement here, all the more so since it was the phase of distinct infiltration of Lusatian settlement just into this region. In the light of this, the presence of the three daggers of Sosnova Maza type in the region of Przemyśl, becomes clear and their connection with the set Noua-Sabatinovka seems to raise no doubts.

M. Gedl [18] pronounces for the influx of a Transcarpathian origin on population to the San basin area at the end of Bronze Age II and III. Moreover he draws attention to utensils from Grodzisko Dolne, Rzeszów Voivodeship, to which we add some others from the middle Dniester course, that have analogies among finds of the Noua type.

The findings we have mentioned show indeed connections with the south, i.e. Transcarpathia (the cheek-piece from Bełz) as well as with the Dniester basin (all the three daggers), which was occupied, starting from its middle part, by Noua Culture settlement. Considering however the fact that similar horn cheek-pieces have also been found in Moldavia, also in Noua assemblages, I should deem connections with the Dniester area to have more probability, all the more so because we still know very little about the character of settlement in BD — HaA 1 period in Eastern Slovakia, therefore in the territory which could in this case have played the role of mediator. The character of settlement and culture determined by the name Felsöszöcs-Stanove over Transcarpathia and its continuation since BD — HaA 1 in Gáva culture is still not very clear. Till we arrive at a more detailed elaboration of materials concerning these cultures, the question of the so-called Transcarpathian influence on the San basin will remain uncertain.

At the present stage of research it is impossible to determine the participation also of the remainders of Komarów settlement with which we still have to do in the upper Dniester basin,[19] either. All the four specimens mentioned have been revealed in territories, where since Bronze Age III (i.e. BD) we have met settlement of Lusatian Culture: (Tarnobrzeg and Ulwówek group).[20] Whereas there is no evidence for the possibility of an infiltration of representatives of the strictly Srubna Culture (Sabatinovka group) from the steppe zone of the northern coast of the Black Sea, along the Dniester and westwards,[21] although this is just the origin of those hypothetical bronze-founders that points to this zone where many finds reveal the presence of local casting

workshops (e.g. Krasniy Mayak). Should we indeed accept the share of representatives of the Noua Culture to have been carriers of these objects, then prototypes of swords and daggers of the Sosnova Maza type should be sought in the steppe zone and the area of Sabatinovka group, Srubna culture. The finding of another bronze dagger from Orelets, Ivano-Frankovsk region (U.S.S.R.)[22] seems to confirm the above. This type appears only sporadically in the very Noua Culture, but it belongs to the most characteristic objects in the steppe zone from the north of the Black Sea coast, and appears somewhat later in a modified form also in the compass of the Byelogrudovka Culture.

The above mentioned finds of the Noua Culture in the Dniester and San basins confirm the chance of this culture's influence having reached much further west in BD-HaA 1, than was so far accepted in the literature,[23] but also admit the fact of its settlement having infiltrated here.

The cheek-piece of Bełz and the dagger of Rożubowice, connected by T. Sulimirski[24] with the group of the so-called Thraco-Cimmerian relics, as well as the two further daggers from Jarosław and Przemyśl, should therefore be crossed out from the register of this group of relics. They prove the Sabatinovka-Noua Culture circle to have acted here since the 13th-12th centuries B.C.

No less complicated is the question of findings disclosed in the compass of Lusatian Culture, generally determined as eastern or the so-called Pre-Scythian ones and considered so far to be "Cimmerian" (map). They are dated back to the period from the 8th to the second half of the 7th centuries B.C. and differ clearly from findings ranged among Scythian ones, characteristic from the end of the 6th century B.C.[25] For large territories of Eastern and Central Europe both groups of findings and relics are determined by two well dated phases of eastern influence: the Pre-Scythian phase in HaB 3 — HaC 1 and the Scythian one — for the Lusatian Culture in HaD 1—2, — yet for the Carpathian Basin and the Dniester basin in HaD 1—3.

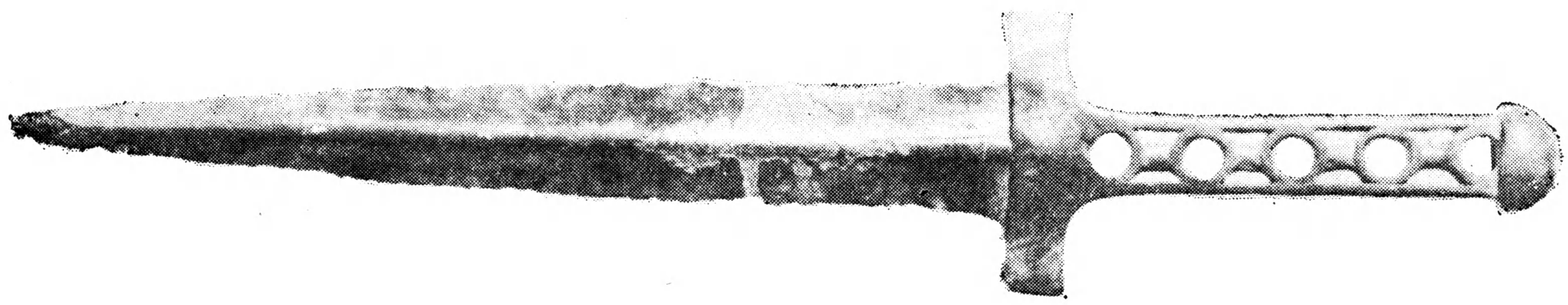
Findings and loose, the so-called Pre-Scythian (or generally labelled "eastern") objects in the area of the Lusatian Culture, include mostly war equipment or elements of horse harness, while body and clothes ornaments occur only sporadically. We shall further acquaint the reader with these finds, stressing at the same time that in comparison with the character of sets with similar objects, particularly in the Carpathian Basin, these show a considerable specificity,[26] which will be discussed below.

Two variants of daggers of the Kabardino-Piatigorsk type in the discovered sets of armament are remarkable. From Gamów (Katowice

Voivodship, Upper Silesia) from the hoard (fig. 5) in which, — among other objects — a Möringen's type sword was found, — comes an all-bronze dagger of the Gamów-Berezovka variant with an openwork helve, dated, due to the assemblage, to HaB 3.[27]

Another dagger of this variant has been found in a hoard from a defence settlement of Lusatian Culture at Kotouč-Štramberk (North Moravia, CSSR) (fig. 6), dated there also to HaB 3;[28] this specimen differed from the former by its bronze hilt and iron blade (kept only in fragments).

The second variant named Goloviatino-Leibnitz, with crosslike hilt, is represented by specimen No. 1 from the hoard at Klein Neundorf, Kr. Görlitz (GDR).[29] Its hilt is made in bronze and its blade in iron (fig. 7).



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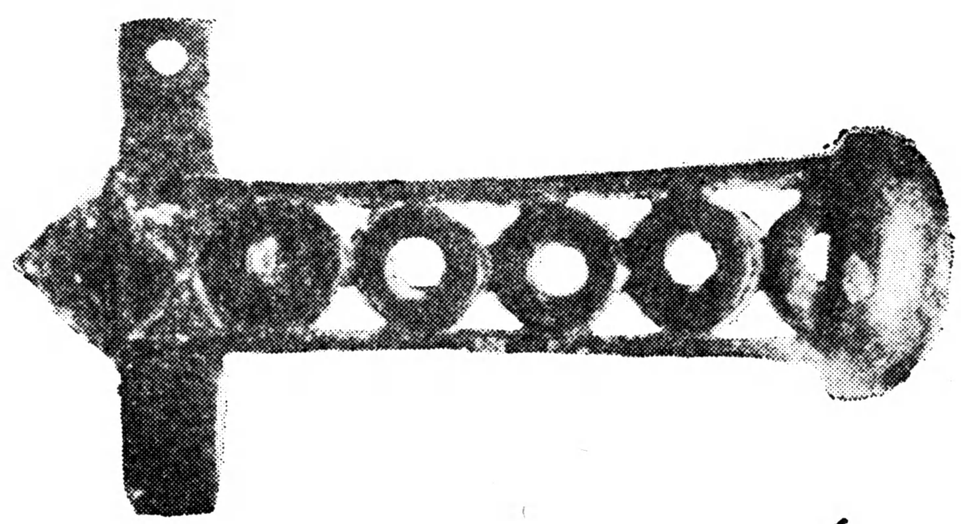

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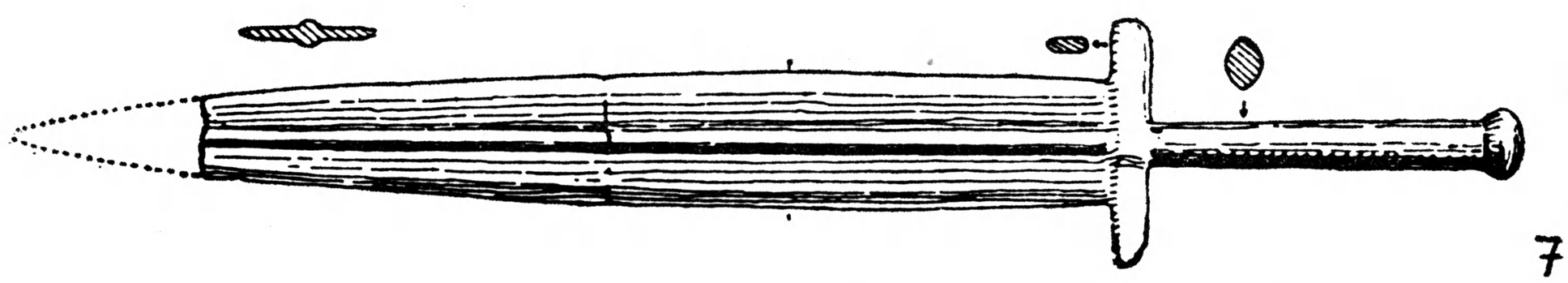

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Figs. 5—7. Daggers of the Kabardino-Piatigorsk type

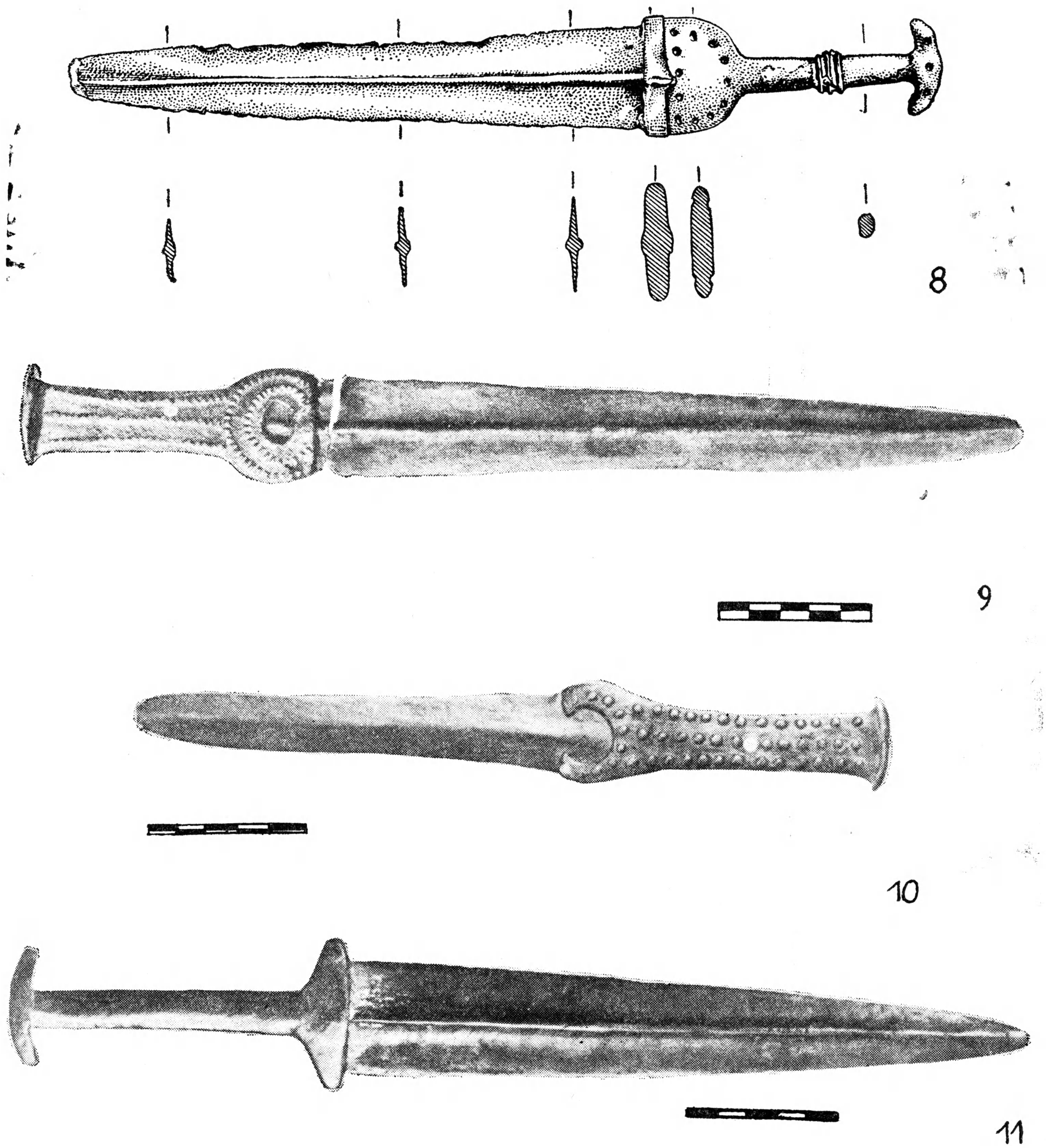
5. Gamów, Katowice Voivodship, specimen of the Gamów-Berezovka variant, after Z. Bukowski; 6. Kotouč-Štramberk, dist. of Nový Jičín, CSSR, specimen of the Gamów-Berezovka variant, after V. Podborský; 7. Klein Neundorf, Kr. Görlitz, GDR, specimen No. 1 of Goloviatino-Leibnitz variant, after W. Coblenz

The analysis concerning the occurrence of daggers of both variants indicated their origin to be the North Caucasus and the middle Volga basin,[30] where they had appeared already at the beginning of the 8th century B.C. Similar finds scattered in many a locality over the middle Danube basin are dated back to the period of mid-8th — mid-7th centuries B.C.

To the next all-bronze daggers, considered or suspected to be of eastern origin and perhaps connected with the "Pre-Scythian" phase, belongs the specimen No. 2 from the Klein Neundorf hoard (fig. 8), dated back to the same period,[31] and also another from the hoard from Podrybnice, (Central Poland) generally dated back to the Bronze Age V (fig. 9). The latter has distant analogies in Eastern Kuban and particularly in the North Caucasus (Koban culture) on the river Kama and in South-West Siberia, — they can, however, not be a sufficient base to state the origin of this dagger. Specimen No. 2 from Klein Neundorf, besides distant analogies from the range of Koban Culture and Ananino on the river Kama, shows closer connections with similar finds from south-western Iran, from Luristan and the compass of Marlik Culture (Amlash) dated back to the 12th-9th centuries B.C.[32] A small bronze figurine of a goddess comes from the same region of Luristan, Pusht-i-Kuh locality (fig. 12), dated back to the beginning of the first millennium B.C. The goddess wears a belt with a dagger much like the specimen No. 2 from Klein Neundorf.[33]

Whereas the eastern origin of another, loosely found dagger from Czermno, Płock Voivodship (Mazovia, Poland) (fig. 10), with a hilt ornamented by the imitation of a few rows of rivets cast in a mould;[34] should be treated with serious reservations, although it is somewhat related to the specimen from Podrybnice. A similar doubtful eastern origin can be ascribed to the bronze dagger from the hoard from Wojciechowice, Kielce Voivodship (Central Poland),[35] found together with three swords (some of them from Western Europe) and generally dated back to Bronze Age V (fig. 11). Both daggers fail to have analogies in accessible materials from South-Eastern Europe; very distant analogies from Siberia might perhaps indicate their eastern origin, particularly if we notice that closely related analogies are to be found just in those areas.

It is equally difficult to determine the origin of the bronze spearhead, said to come from Klein Runderstedt, Kr. Erfurt (GDR), with ornamented leaf-like surface (fig. 13), judged by T. Sulimirski[36] to be of eastern origin. It has no, even distant, analogies in accessible East-European material of this phase, or in West Siberian material of the Karasuk and Tagar phases. Whereas we have an iron dart with narrow

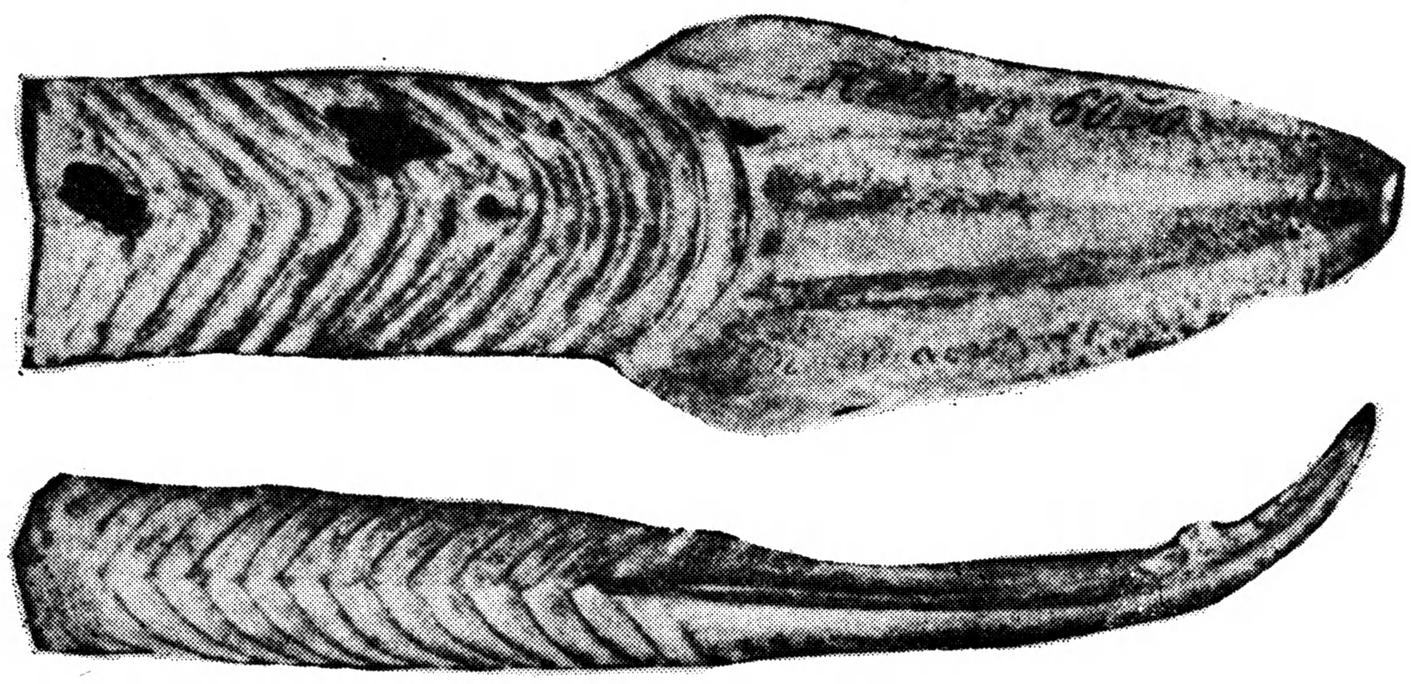


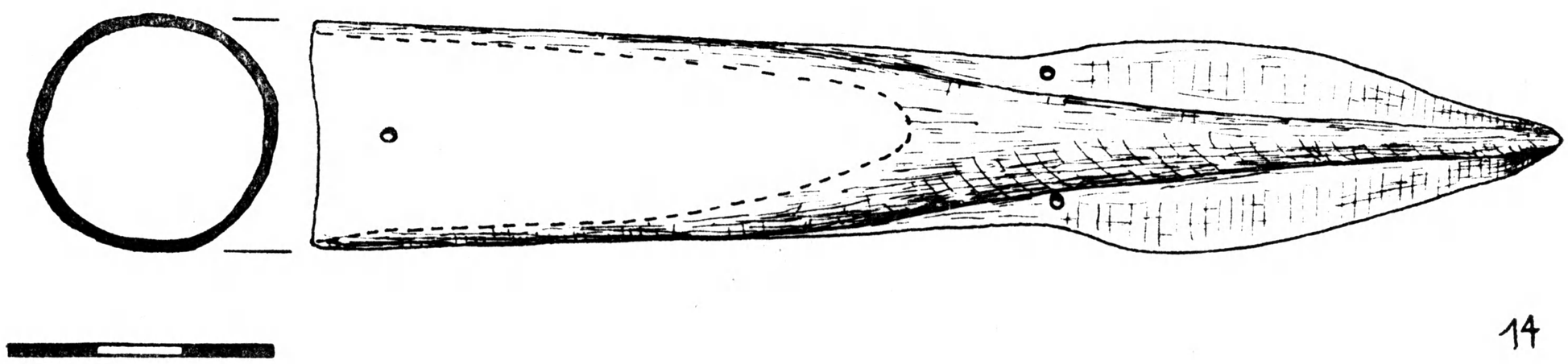
Figs. 8—11. Bronze and iron daggers of probably "eastern" origin: 8. Klein-Neundorf, Kr. Görlitz, GDR, specimen No. 2, after W. Coblenz; 9. Podrybnice, Sieradz Voivodeship, after Z. Bukowski; 10. Czermno (?), Płock Voivodeship, after Z. Bukowski; 11. Wojciechowice, Kielce Voivodeship, after Z. Bukowski

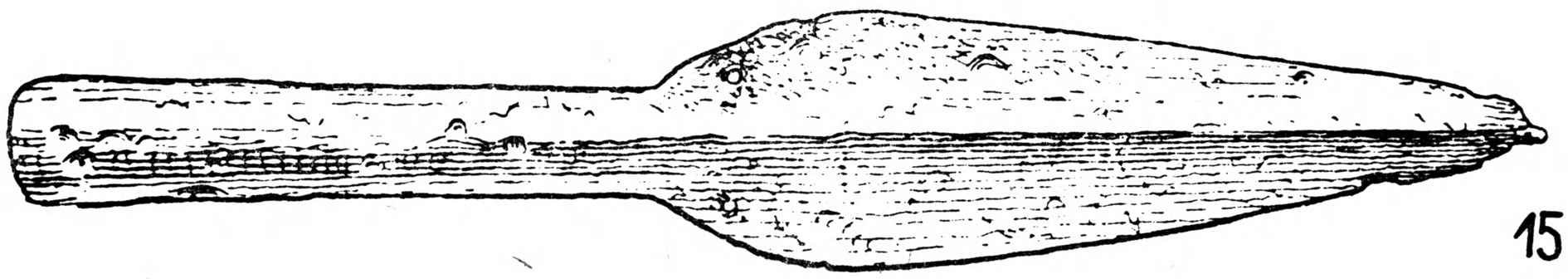
leaf-like blade and two small apertures at the leaf's base, coming from a Lusatian Culture cemetery in Vysotskoe, reg. Lvov (U.S.S.R.) (fig. 14).[37] A number of analogies from the territory of Ukraine (among the others assemblages judged to be Cimmerian), from Bulgaria and the Great Hungarian Plain, date that type to the period from 8th — the

Fig. 12. Push-i-Kut (Luristan, North-West Iran). Bronze figurine of a goddess from the beginning of the first millenium B.C., with a dagger much like specimen No. 2 from Klein Neundorf hanging at her belt; after J.-L. Huot

middle of the 7th centuries B.C. Their eastern origin is recognized and the character of assemblages, in which they have been disclosed, is linked with the Thraco-Cimmerian horizon, while in respect to findings from the northern coast of the Black Sea — with assemblages of a Cimmerian character. It should, however, be noticed that iron and bronze spearheads of the same time, having also small apertures at the base of their leaf, are known from Sicily and Italy and from the German Democratic Republic (the hoard of Quellendorf, Kr. Köthen, see fig. 15); the specimens disclosed there represent, however, western forms.



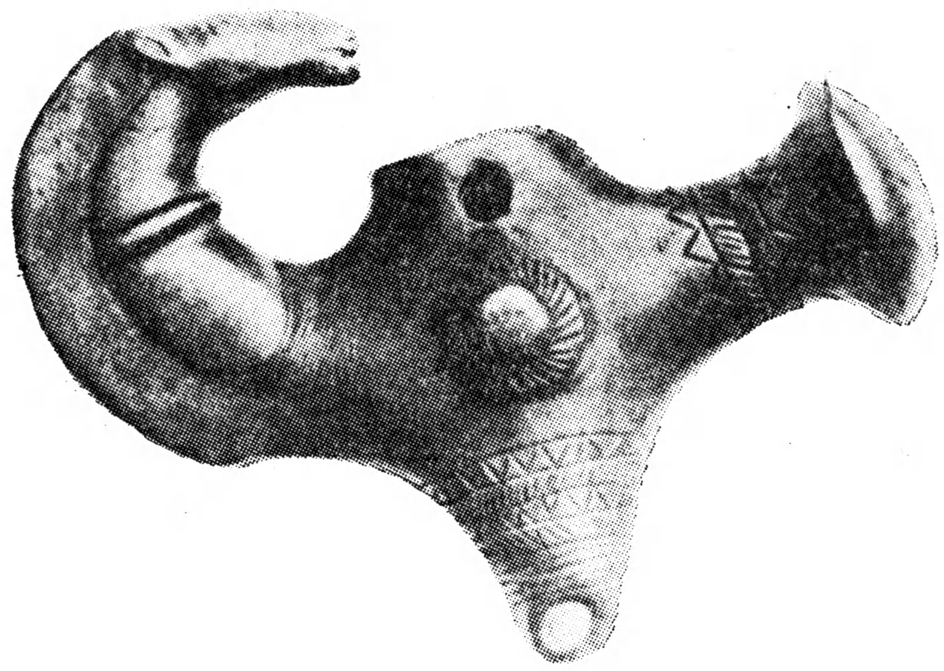


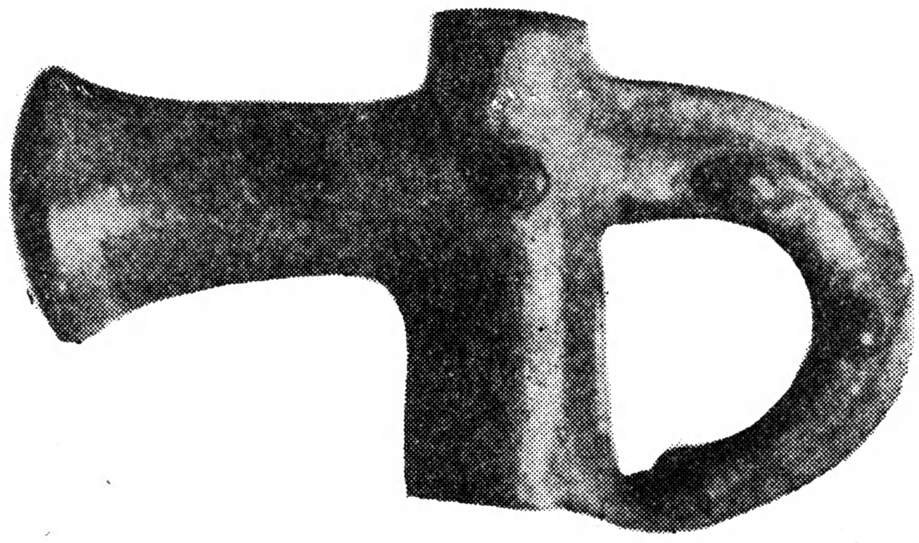


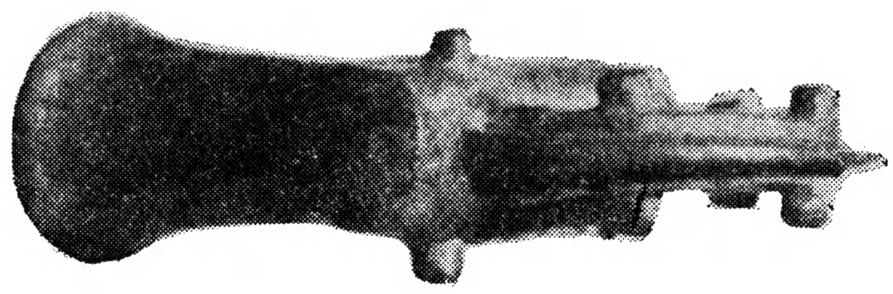
Figs. 13—15. Spear-heads of "eastern" origin:

13. Klein Ruderstedt (?), Kr. Erfurt, GDR, after T. Sulimirski; 14. Vysotskoye, dist. of Lvov, U.S.S.R., after Z. Bukowski; 15. Quellendorf, Kr. Köthen, Anhalt, GDR, after E. Sprockhoff

The next group of findings will be small battle-axes skipetary-type (so-called *szepter*), represented by two types: natural ornament in the shape of a small plastic animal head, or a stylized ornament. These relics have also occurred in the middle Danube basin.[38] The first type is represented in the area of Lusatian Culture by a loose find (?) from the neighbourhood of Turiec (Central Slovakia, C.S.S.R.) dated to the 8th-half the 7th centuries B.C. (fig. 16). Owing to its ornament, being a small horse head, it has been determined *"Pferdekopfszepter."* [39] The second specimen comes from a Lusatian Culture grave (Platenice phase) from Předměřice, reg. Hradec Kralové (Eastern Bohemia, C.S.S.R.); the same grave delivered a sword, the fitting of a shield base (so-called shoe) and parts of horse harness (fig. 17); the grave assemblage gives them dating to the beginning of HaC, i.e. the first years of the 7th century B.C.[40]







Figs. 16—17. So-called Pre-Scythian bronze battle-axes ("skipetar"):
16. Turiec — and — neighbourhood, Slovakia, CSSR, after S. Gallus, T. Horváth; 17. Předměřice, dist, of Hradec Králové, East Bohemia, CSSR, after J. Werner

Analogies from Hungary and the North Subcaucasus indicate the clear eastern origin of such objects and their dating in Central Europe to the second half of the 8th — beginning of the 7th centuries B.C. It is to be stressed, that skipetar battle-axes were no element of armament, but sings of authority. They find their later continuation in similar Scythian relics from the 6th-5th centuries B.C.[41]

Defence settlements of Lusatian Culture of South Moravia in Brno-Obřány (fig. 18)[42] and probably at Křepice, reg. Znojmo (C.S.S.R.)[43] furnished bone arrow-heads, typical of the so-called Pre-Scythian phase in Ukraine, but quite absent over Central Europe. It is worth while to note here, that similar arrow-heads occurred in the Vysokaja Mogila cemetery, near the village of Balki, region Vasiliev (Zaporozhe, U.S.S.R.) recognized to be Cimmerian; the arrow-heads are dated there to the 8th—7th centuries B.C.[44] Due to the fact, that the arrow-heads of Brno-Obřány have been found in a destroyed defence settlement of HaB 3, and that they can be connected with Cimmerians, it is not unlikely that this find can state one of the objects of the hypothetical track of groups of Cimmerians moving within the Carpathian Basin or may have been an object destroyed by some Cimmerian group.

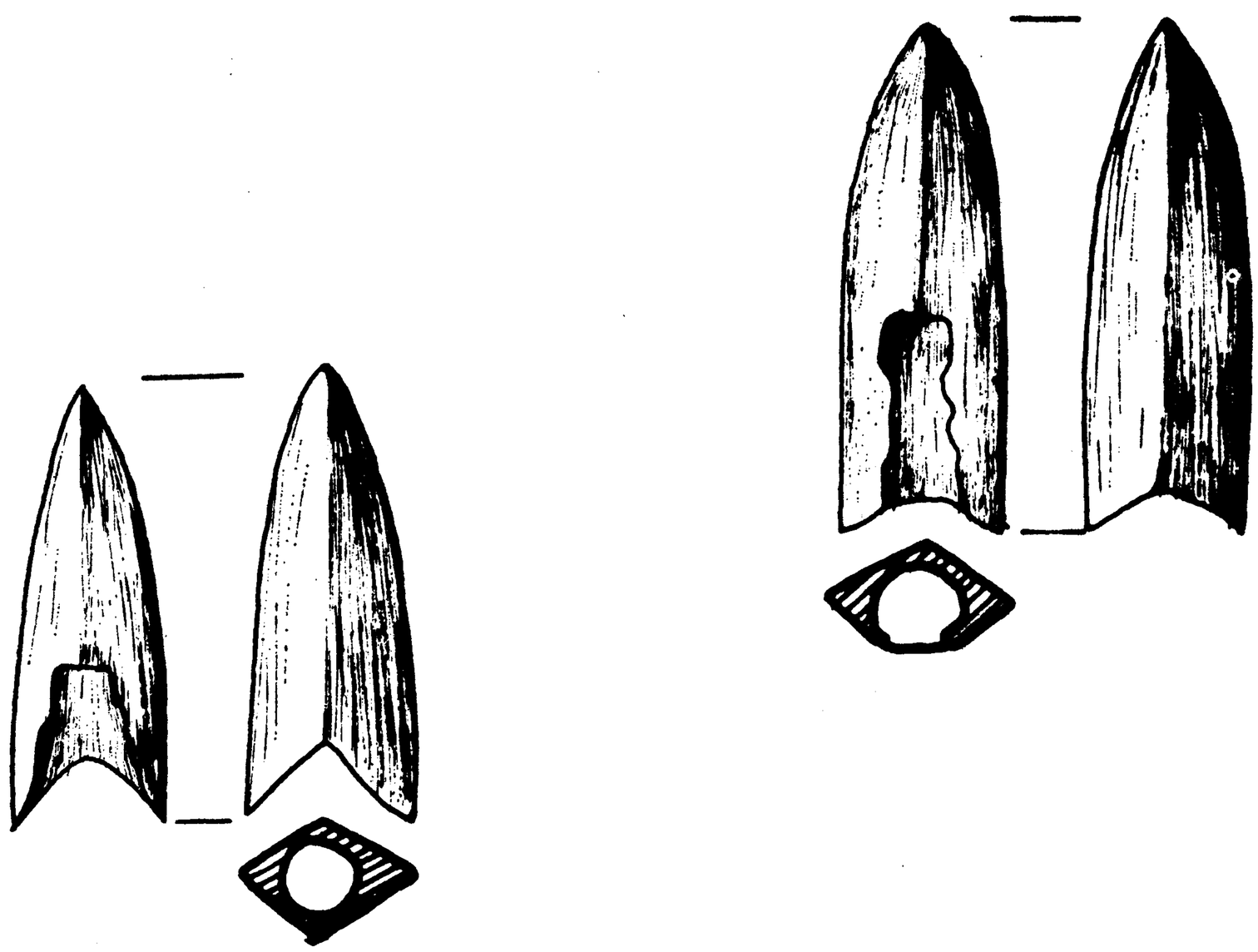
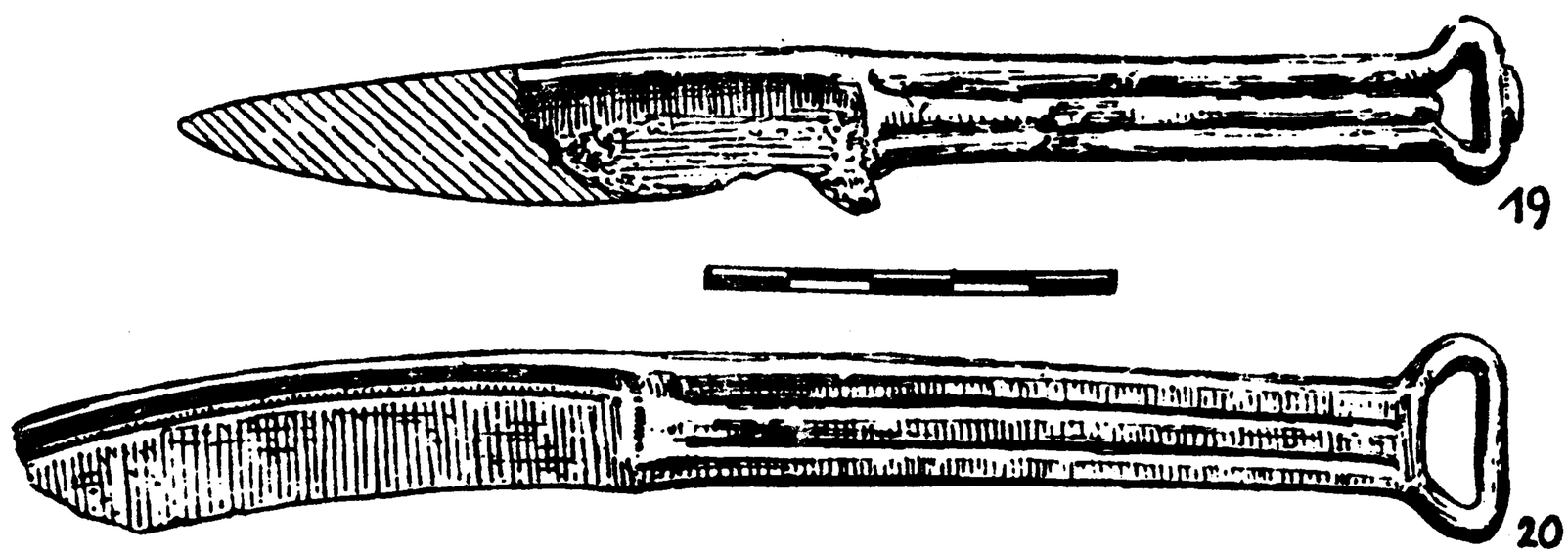


Fig. 18. Brno-Obřány, South Moravia, CSSR. Bone arrow-heads of the so-called Pre-Scythian type, after Z. Bukowski

We have two bronze knives of the Siberian type, one found at Strzegom, Wrocław Voivodship (Silesia, Poland), the other supposedly

from Śmiełów, Kalisz Voivodship (Central Poland) (figs. 19 and 20).[45] Many analogies for them are known from south-western Siberia (Karasuk Culture and particularly the Minusinsk Basin), they are dated to the 8th—7th centuries B.C.[46] They may, however, be connected with groups of the so-called Pre-Scythian finds, as well as with Scythian ones, although it should be stressed, that in the Scythian environment, in the area of the northern Black Sea coast, or in the forest-steppe zone over the Dnieper, such knives are practically unknown.[47]

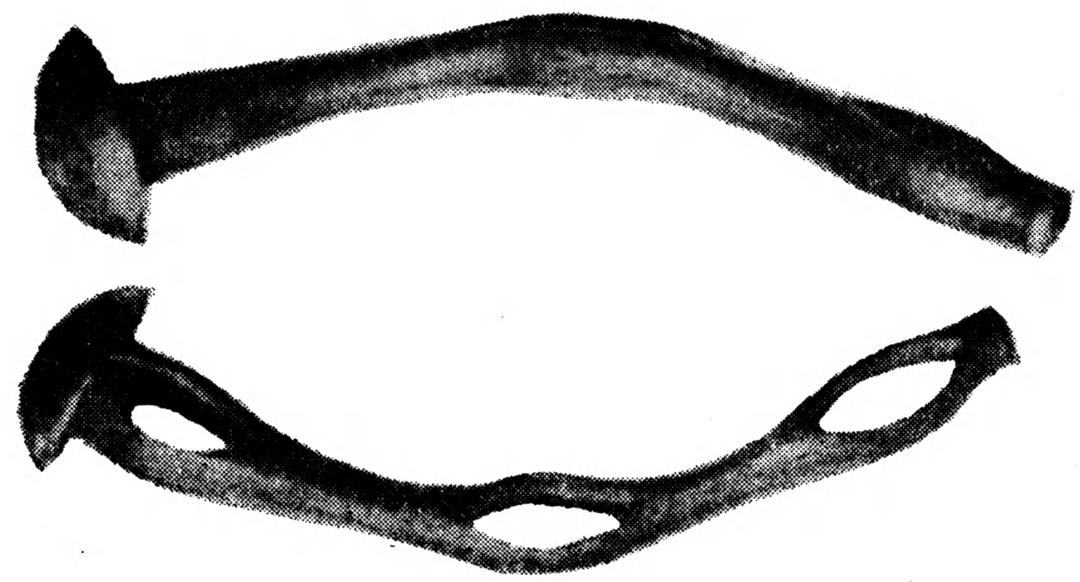


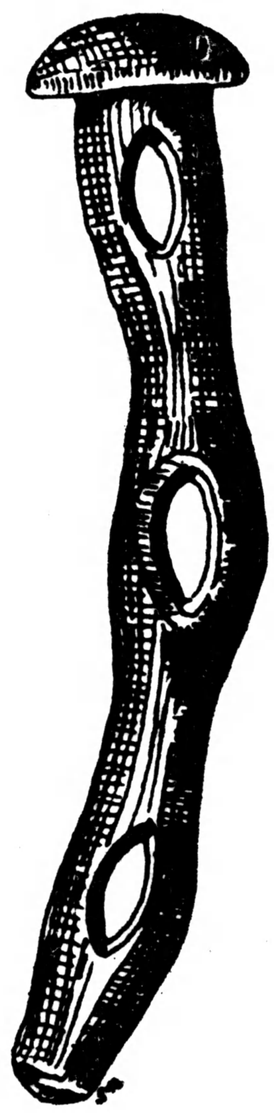
Figs. 19—20. Bronze, Siberian type knives:
19. Strzegom, Wrocław Voivodship, after M. Jahn; 20. Śmiełów (?), Kalisz Voivodship, after Z. Bukowski

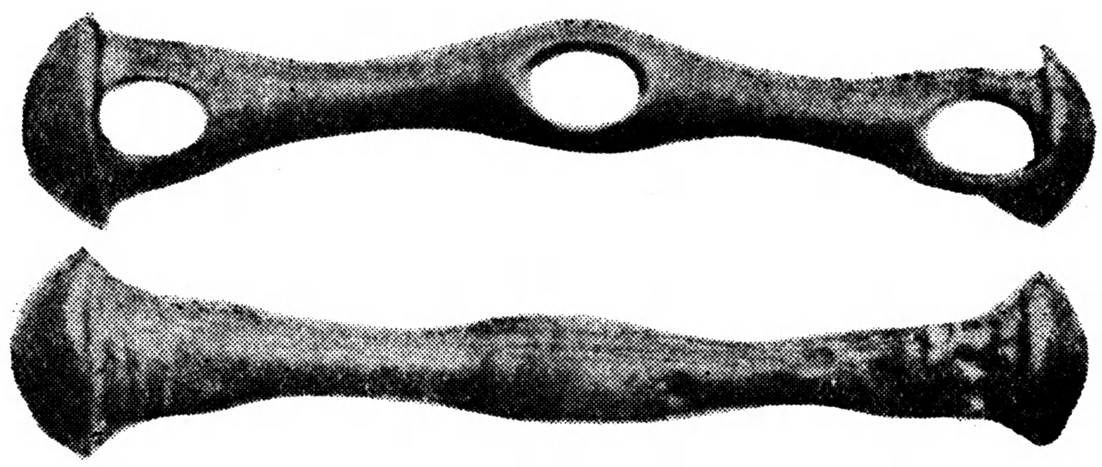
V. Podborský[48] connects numerous whetstones made in sandstone with the so-called Thraco-Cimmerian horizon. They have apertures to be hung and are known only from the mixed border zone along South Moravia. They have been disclosed however in many assemblages of North Caucasus and the Carpathian Basin, dated to the 8th and half of the 7th centuries B.C., together with objects typical of that phase, among the others, pieces of armament and parts of horse harness, in types already discussed. Therefore I am inclined to place the whetstones mentioned among the so-called Pre-Scythian finds and not "Thraco-Cimmerian" ones, as Podborský does, for their prototypes seem to be of eastern and not local origin, as it is accepted for the so-called Thraco-Cimmerian category of relics, which will be dealt with further on.

Another supposition of the author mentioned does not seem well grounded. He also accepts the eastern origin of iron flat axes with protuberance, connecting them with the "Cimmerian" influence. They are to be found in Central Europe only in HaC, and have come most probably from Italy. At any rate the lack of similar finds from the north of the Black Sea coast and from the forest-steppe zone of Ukraine (Byelogrudovka and Chernoles cultures), seems to exclude their having been brought here from the east, just from this direction.

Finds containing a few elements of a horse harness constitute a separate group of no doubt eastern origin. We have two bronze cheek-pieces found in the hoard of Černotín, distr. Přerov (Moravia, C.S.S.R.) (fig. 21),[49] disclosed together with a bronze ornamented button, the so-called *Phalere*. These cheek-pieces belong to type IV, after Iessen, called also Chernogorovka type, and they are dated back to HaB 3. They have many analogies in the region of North Caucasus and in the steppe zone of the north Black Sea coast. The cheek-piece from hoard III of Karmin, Wrocław Voivodship (Silesia, Poland) belongs to the same type; it was disclosed together with other elements of a horse harness and dated by an assemblage of relics back to HaB/C (fig. 22).[50] Both hoards certainly belonged to the Lusatian Culture.







Figs. 21—22. Bronze cheek pieces of Chernogorovka type:
21. Černotín, dist, of Přerov, CSSR, after V. Podborský; 22. Karmin, Wrocław Voivodeship, after H. Seger

A grave containing various categories of ornamented parts of horse harness typical of the so-called Thraco-Cimmerian horizon, was found in the Liptov region (North Slovakia, C.S.S.R.).[51] This assemblage differs by character from other similar so-called eastern finds from the range of the Lusatian Culture; it was till recently considered to come from

Kisköszeg (Hungary). But S. Foltiny in a convincing way stated its actual place of discovery in North Slovakia. I shall for my part add that it is certainly a strange assemblage for Lusatian Culture settlement in this territory, it might therefore indicate the penetration into this zone, being after all the border of Lusatian settlement, of an ethnically strange group even in the scale of the Carpathian Basin. The detailed analysis of particular objects composing the inventory of that grave elaborated by the present author,[52] revealed here the presence of the so-called "Thraco-Cimmerian" elements from the Carpathian Basin, as well as others, having analogies in Kuban, in North Subcaucasus and in Cimmerian finds from the northern Black Sea coast. The whole of them is dated back to the turn of HaB and C, and generally to half the 8th—half the 7th centuries B.C. In the context of similar finds from the Carpathian Basin, the grave mentioned may be counted among the group of finds connected with the infiltration of ethnically strange groups from the east.

Finally from Wrocław-Wojszyce (Silesia, Poland) comes a loosely found (?) cross-like part of a horse harness,[53] similar to the one discovered in Liptov. It is probably dated back to the same time, but the circumstances of discovering it are not clear; it may have come from a destroyed "Lusatian" grave out of a cemetery in this locality, the youngest phase of which might fall to the decline of the Bronze Age.[54]

The last find of a loose character is the gold bracelet from Miecznikowo (known also as coming from Vogelgesang) Wałbrzych Voivodship (fig. 23), considered so far as a relic related to the Scythian phase.[55] Already L. Franz[56] drew attention to the possibility of connecting it with the relics of a similar type from Armenia, the Caucasus and Luristan, quoting analogous bracelets with tips in the shape of stylized heads of prey birds. Similar was the recent attitude of B. Brentjes,[57] quoting analogies for the bracelet of Miecznikowo in the Hettite-Syrian circle of the 9th—8th centuries B.C. This object should be crossed out from the register of the so-called Scythian relics and transferred to the group of the so-called Pre-Scythian ones, of an undoubtful Middle-Eastern origin.

In order to clear the origin and character of eastern assemblages and relics disclosed in the range of the Carpathian Basin and the southern part of the area of the Lusatian culture, it will be right to draw a short characteristics of their particular categories and pay attention to which of them occur also in the area of the northern Black Sea coast. This is necessary for further settling whether there are bases to recognize their "Cimmerian" origin, or in accordance with

Fig. 23. Miecznikowo, Wałbrzych Voivodeship. Gold bracelet of probably West-Asiatic origin, after B. Brentjes

our suggestions, motivated in detail in another place[58] — whether they can be labelled with the term "Pre-Scythian."

The starting point for further considerations is the statement, basing on the stage of research attained so far, that the objects discussed below show distinct concentration in three regions of Europe: (1) the Carpathian Basin, (2) the North Subcaucasus and the neighbouring steppes of Kuban and (3) the area over the middle Volga and Kama.[59]

Among the many daggers and swords of the Kabardino-Piatigorsk type, the variant Gamów-Berezovka is represented in the area of the north Black Sea coast and the Dnieper forest-steppe zone by only one find from South Moldavia's steppe zone (found probably in a Cimmerian grave), and the variant Goloviatino-Leibnitz — by two specimens loosely found in the Dnieper forest-steppe zone. We lack here also ferrules of the sword-sheath (so-called shoes) of the Ugra type and skipetar battle-axes; neither are spear-heads, bronze or iron ones, provided with two little holes at the base of their wings — numerous. Among specimens met in the area of the Carpathian Basin there were also bronze spear-heads of the Koban type, unknown over the northern Black Sea coast, and all sorts of ornaments and buttons of the horse harness (the so-called *Phalere*) having close analogies in similar findings from Kuban and the North Caucasus. The latter occurred only sporadically over the north Black Sea coast.

Whereas the sides, of particularly types I and III according to Essen, belonged to the so-called Pre-Scythian relics occurring in great quantities and characteristic of both the North Caucasus and Kuban as well as of the Carpathian Basin on the one hand, and of the Dnieper area and the northern Black Sea coast on the other. They are much scarcer in the Volga Basin.[60] The fact of their so vast and general outreach, from the Caucasus to the Danube, can be linked not so much with the spreading among the Cimmerians of that element of the harness, as with the reverse process: the widespread use among the steppe population of the northern Black Sea coast of the saddle-horse, to the Sub-Caucasian origin in the steppe zone to which attention is drawn by A. A. Essen.[61]

Moreover essential seem to be here the remarks of E. N. Černyh, based on the results of metallographic examination of bronze articles, the so-called Pre-Scythian articles from the northern Black Sea coast and the Sub-Caucasus.[62] Notwithstanding the great similarity of their forms, a decidedly different composition of the bronze raw material has here been stated; this would seem to indicate the possibility of their independent production in both the mentioned areas up to the moment, however, of a publication of these results, we shall do no more than draw attention to this observation.

The whole typology of "eastern" finds and relics accessible in the area of Lusatian Culture, reaching back to the 8th—7th centuries B.C. makes it clear that a large part of that type of objects shows close connections with similar findings coming from the Carpathian Basin and particularly the Great Hungarian Plain,[63] and dated back to the turn of the 9th to half or the end of the 7th centuries B.C.

The phase contemporary to HaB 3 and the beginning of HaC is represented in the area of Lusatian Culture by the following finds: daggers of both the variations of the Kabardino-Piatigorsk type, spear-heads with little holes at the base of wings, skipetar battle-axes and some elements of the horse harness (especially cheek-pieces of Chernogorovka type). The objects mentioned have been found only in the south and south-western parts of the Lusatian Culture and almost exclusively in assemblages related to the local population such as graves, hoards or settlements, sometimes loose finds. The decided majority of these findings does not allow linking them with a supposed infiltration or assaults of strange populations, with the exception of the grave assemblage of Liptov, from the border zone, or the arrow-heads from the destroyed settlement of the Lusatian Culture in Brno-Obřány and perhaps in Křepice too. The remaining objects of "astern" provenance will have to be recognized as imports and at the present

stage of research it will be the only feasible explanation of their presence in the compass of the Lusatian Culture settlement.

As to the character of assemblages in which these objects have been disclosed, the area of the mentioned culture shows considerable differences in relation to similar finds from the area of the Carpathian Basin, for the latter are mostly connected with graves and hoards, showing to a large extent connections with a strange population of eastern origin, whose *ethnos* is still not well determined, penetrating into this area. It has moreover been shown in a convincing way by S. Gallus', T. Horváth's and later by G. Gazdapusztai's studies. These differences are also marked by the fact, that among eastern relics in the area of Lusatian Culture, it is possible to distinguish a group of objects not represented in the Carpathian Basin by similar materials; I mean relics of Siberian and Asiatic origins, and others probably "eastern."

To sum up, finds from the area of the Lusatian Culture of a probable or reputed eastern origin should be divided into the following groups:

(1) Relics from Bełz, Jarosław, Przemyśl and Rożubowice, dated back to the 13th—12th centuries B.C. are linked with the acting probably of Noua Culture (phase Sabatinovka-Noua — Srubna Culture) and should form a separate group. Cheek-pieces of the Bełz type have correspondents over the Dniester Basin as well as in the Carpathian Basin (similar cheek-pieces of the Borjas type); but the daggers mentioned are represented in the Carpathian Basin only by the Krasniy Mayak variation while specimens of the Sosnova Maza type occur only in the east.

(2) The arrow-heads of Brno-Obřány and perhaps Křepice are probably linked with historical Cimmerians; layers especially of the first of these two settlements show destruction to have raged in HaB 3. This group will include also the Liptov assemblage.

(3) The following weapons and parts of the horse harness have close analogies in North Subcaucasus, over the middle Volga and Kama and in the Carpathian Basin: daggers of Kabardino-Piatigorsk type from Gamów, Klein Neundorf (specimen No. 1) and Kotouč-Štramberk; cheek-pieces of Chernogorovka type from Černotín and Karmin, some parts of horse harness (also those of Liptov), others from Wrocław-Wojszyce, spear-heads from Vysotskoye and perhaps from Quellendorf, bronze skipetar-axes from Přdměřice and "Turiec-and-neighbourhood."

(4) Close analogies with South Transcaucasus and North Iran are shown by: dagger No. 2 from Klein Neundorf and gold bracelet from Miecznikowo.

(5) Close analogies with finds of south-western Siberia are shown by both knives of the Siberian type from Strzegom and the one reputed to be from Śmiełów. Relics of that type do not appear either in the territory of the northern coast of the Black Sea or in the Carpathian Basin; perhaps the dagger of Czermno may be placed in this group.

(6) The following relics have distant analogies in the findings from the South-Eastern Europe, the Caucasus area and South-Western Siberia: the daggers of Podrybnice, Wojciechowo and the dart reputed to come from Klein Runderstedt. Their eastern origin is very doubtful.

The findings listed in point (1) require a separation into a much earlier group, not linked with the so-called Pre-Scythian findings. Only the finds of groups (2) and (3) are closely connected with the set of problems we are discussing, while those listed in points (4) and (5) could have been brought to the area of Lusatian Culture owing to the influence or contacts with the east, unyielding however to more precise definition. A detailed analysis of the relics included into point (6) is indicating serious difficulties in finding their analogies in the east. They have therefore been placed here among the relics reputed to be eastern, requiring, however, further, more detailed studies, leading to the confirmation or rejection of this supposition.

We have not quoted other, not numerous, objects, closely linked with the so-called Thraco-Cimmerian group, coming certainly from the Carpathian Basin.[64] This group of relics occurred exclusively in the southern groups of Lusatian Culture in Bohemia and Moravia and in areas adjacent to those from the south. A large part of the range of this culture is quite void of the finds mentioned. This is the next feature differentiating the so-called Thraco-Cimmerian finds from the area of Lusatian Culture as compared with similar finds from the Carpathian Basin, common in this area and in a relatively proportional distribution. They are also characteristic of the culture of the so-called Thracian Hallstatt in the Dniester basin, but do not appear in eastern groups of the Lusatian Culture — Wysocko and Tarnobrzeg. Besides, we shall add, that the so-called Thraco-Cimmerian relics show, in the remaining area of Europe, a vast range of occurrence, reaching south as far as Bulgaria and Macedonia and west to North Italy, Bavaria and Switzerland.[65]

It should be further added that both the categories of finds, i.e. (1) those with outstanding characteristics of eastern origin, and (2) the so-called Thraco-Cimmerian ones mark in the area of South-Eastern and Central Europe (especially the Carpathian Basin) a well chronologically determined horizon (phase), limited to HaB 3 and the beginning of HaC. The presence of both these categories should be

considered in the context of eastern acting in this chronological phase. The explanation of their presence or their formation of some of their forms in Central Europe requires, however, indispensable arguments to determine the character and the size of the acting mentioned, identified by many investigators with the Cimmerian's essential role. It should, however, be emphasized that, in spite of our knowledge of a large number of finds of both these categories as well as of the culture-and-settlement relations in South-Eastern and Central Europe, the very process (or mechanism) of the appearance and distribution of these findings, there is still a lot to be done. Therefore, we must limit our controversial conclusions below to some basic remarks only.

Acquiring a possibly correct answer, concerning the origin of the above mentioned objects of eastern provenance, requires a given attitude towards the problem of the Cimmerians in South-Eastern Europe and determining their reputed or true role in the Carpathian Basin and the adjacent part of the Lusatian Culture. Acquiring convincing arguments may permit a closer knowledge of the mechanics of the transfer of the above characterized "eastern" elements from this phase, also into the compass of the Lusatian Culture settlement.

Historical Cimmerians in the area of the North Pontic, perceptible in archaeological finds and written documents from the mid-9th or the turn of the 9th century B.C., were I dare say the direct descendants of a part of the Srubna Culture population of the Byelozierka phase (I mean the western groups here).[66] It is accepted that the appearance of the Cimmerians as a historical people, whose name was recorded in the ancient literature, spelled at the same time the final (late) stage of that community's development determining for South-Eastern Europe the so-called Pre-Scythian period. It should, however, be clearly said here that the occurrence of findings recognized as a probable material trace of Cimmerians is limited exclusively to the steppe zone of the northern Black Sea coast. The westernmost findings linked with Cimmerians originate from Tiraspol, on the middle Dniester. To the north, they reached the vicinity of Dnepropetrovsk, to the south the Crimea, as far as the northern foreland of the local mountains, and to the east Donets in the neighbourhood of Lugansk. Determining those finds generally, we may say, that they are mostly grave assemblages with inventory of the type of finds from Simferopol and Butenki, or the hoard of Novocherkassk (1939), which today still comprise a small group of findings (assemblages), supplemented, however, by many loose finds from this area.

Archaeological literature as well as accessible written documents of ancient authors and toponymics do not indicate the indisputable

presence of settlement of a Cimmerian character except in this area i.e. in the territory of Kuban, Sub-Caucasus, on the rivers Don and Volga and further north-east towards the Kama, which have been included into the Surbna culture of the Byelozierka phase.[67] Many investigators are, however, inclined to include the steppes of Kuban, north Sub-Caucasus and the Volga basin among the zones subjected to their assaults. We shall return to this matter below. It is now recognized that the basic area, which sheltered the forming of historical Cimmerians, was only the western part of the Srubna Culture in the area of the north Black Sea coast; the above mentioned regions neighbouring upon it from the east, were not their mother country. This is an observation important to accepting the hypothesis that Cimmerians grew out of the "Srubna" substratum, necessary also to the analysis of relics discovered in the Central Europe and considered to be Cimmerian or so-called Pre-Scythian, having close analogues in the Sub-Caucasus and on the Volga and Kama.

E. N. Čzernyh's[68] studies however, clearly indicate that at the beginning of the first millenium B.C. the metallurgical centre on the northern Black Sea coast, that he determines as "Cimmerian" and connected with the Carpathians (due to the character of the bronze material), was not in accordance with the so-called Srubna one, and the zone of mixing for both was to be the Dnieper valley in its lower and partly its middle courses. This circumstance, supported by a series of metallographic analyses, should be taken into account in further studies.

The zone of "Cimmerian" influence no doubt included the western part of the Kuban steppes and the eastern coast of the Black Sea, treating them as transitory areas for groups of the Cimmerians overriding the areas of Transcaucasus and Asia Minor.[69] They did not, however, embrace a larger part of the Sub-Caucasus or the Central Caucasus highland, which should be particularly stressed. The opinion of some investigators (e.g. A. I. Terenozhkin), suggesting the necessity of including this region into the compass of the Cimmerian settlement, are too weakly grounded. For these regions were held by tribes of the Sindians and Meotians, well documented in written sources, and by the finds of the so-called Koban Culture in the territory of the North Subcaucasus (Kabardino-Balkaria, North Ossetia and Checheno-Ingushetia), showing no material traces connected with the Cimmerians' stay there. We mention here particularly those regions, in which concentrations of the so-called Pre-Scythian (but not Cimmerian!) finds spoken of before, have been disclosed. One more converging point may be added to those regions — the one on the middle Volga

and Kama, alas we do not find even the slightest prerequisite to accept that it could also find itself within the sphere of direct or indirect influence of the Cimmerians. So we do not dispose of archaeological finds bearing "Cimmerian" character in areas eastwards of the Don, which is particularly essential to the set of problems we are discussing.

It is, however, worthwhile to draw attention to the Cimmerians from the northern coast of the Black Sea, who may perhaps have been mediators in the transfer of strange, Caucasian and Asian elements to Eastern Europe. Lately V. S. Bočkarev [70] has ascribed the mediation in the transfer onto the Northern Black Sea coast of not only metal objects he has termed "Koban" and "Caucasian" but also of the mastery of iron and the technology of its production to the invasions of the Cimmerians from Asia Minor and from the Western Asia. These suppositions should, however, be accepted with prudence; we wish to remind our readers that the oldest "Pre-Scythian" finds from North Sub-Caucasus are dated as early as to the end of the 9th or the very beginning of the 8th centuries B.C., which in the context of dating the Cimmerians' assaults towards Asia, indicates serious temporal differences of almost a century.

It should further be stressed, and we are resting on the present state of research concerning this zone of the border between Europe and Asia, that the compass of local occurrence of "Pre-Scythian" armament is by no means identical with the zone, which either lays in the range of the Cimmerians' influence towards the east, or with the one through which groups of Cimmerians shifted in their march towards the Asian civilizations.

The oldest written documents mention "northern nomads" in western Asia (Urartu, Media, Assyria) already in the 9th century B.C. and I dare say those were early Scythians or other peoples related to them, but not Cimmerians.[71] Whereas, the appearance of the latter in Asian written sources as invaders from the north, falls only to the end of the 8th century B.C.; that information is contained in cuneiform texts on earthenware plates from the archive of the palace in Nineveh (northern Irak) from the time of the reign of the Assyrian king Sargon II (722—705 B.C.).[72] We have no archaeological finds in this range for any earlier period and we also lack any written documents, which clearly distinguish Scythians from Cimmerians. The final phase of the contacts of the Cimmerians from the northern coast of the Black Sea with the regions of Asia mentioned, fell to the moment of the Scythian invasion (653—652 B.C.) when the name "Cimmerians" gradually disappeared from the contemporary written docu-

ments. The complete break of all contacts of Cimmerians with the steppes of Kuban and North Sub-Caucasus is linked with the moment of Scythians' moving from Asia through the Caucasus onto the area of the northern Pontic at the end of the 7th century B.C., i.e. about 620—610 B.C. It is at the same time the final stage of the Cimmerians' independent settlement on the steppes of the northern Pontic; those who remained underwent assimilation with Scythians, while some of their groups probably moved to the west.

Should we therefore accept the fact of the mediation of Cimmerians with the south, then: (1) the period of their hypothetical contacts with Kuban and the North Caucasus may have occurred from the 9th/8th to the end of the 7th centuries B.C., while: (2) the period of their direct contact with the Asiatic civilizations situated south from the Caucasus, is practically limited merely to the period from the decline of the 8th to the 7th centuries B.C., i.e. to the phase of their factual raids from the north. We exclude here that part of the Cimmerians, who inhabited the northern part of Asia Minor.

I shall first consider the second of the mentioned problems. A. I. Terenožkin [73] attributes the transfer of various Asiatic elements onto the area of the northern Black Sea to Cimmerians; however, he does not quote those elements in detail. The accessible relic material of this zone, attributed to Cimmerians, or discovered in this area as loose finds, shows no characteristics of Asiatic origin, unless the researcher makes use of some findings so far unpublihed. Single products, reputed to have come from Urartu, were said to reach up to Ukraine, but we do not know, which objects are concerned here or where they have been found; moreover their transfer to the north of the Caucasus had a different course. Whereas, for materials from the Central Europe I rather think that those were Cimmerians who brought the bracelet of Miecznikowo and probably the dagger No. 2 from Klein Neundorf, for these findings show a probable Asiatic origin. However, the bracelet can as well be connected with Scythians, although chronologically and typologically it is linked with a similar group of Asiatic ornaments from the 9th-7th centuries B.C. The Carpathian Basin does not give evidence of the presence of relics of Asiatic provenance in this range, and decidedly none from the Transcaucasus and Western Asia.

It is proper to further remind that onto the Caucasus and Transcaucasia onto the local settlement of among the others Koban Culture the first bronze and bi-metallic objects (bronze + iron), particularly things like: parts of harnesses, weapons, belt ferrules, helmets, etc. started arriving from Urartu and Media, as early as 9th-8th centuries

B.C. It is G. Gazdapusztai [74] who drew attention to the above, considering Caucasus-Carpathian contacts in the Pre-Scythian phase. Hence, when speaking of Cimmerians' contribution to the transfer of Asiatic products unto the territories northwards of the Caucasus, we should first regard the above fact and then, that Cimmerians' practical contribution could be made only during their raids in the direction of Asia. So in this respect the Cimmerians could have only been continuators of an earlier existing exchange. It is again to be reminded that "Cimmerian" assemblages from the "North Pontic" did not provide relics of Asiatic origin.

Similarly not very clear is the Cimmerians' share in transferring from Asia the knowledge of technology and propagation of iron production in the steppes along the Black Sea. Making such a hypothesis on the basis of only scanty findings from the northern coast of the Black Sea and the Ukrainian forest-steppe zone (Byelogrudovka-Chernoles culture complex) is unfortunately too weakly grounded. The lands of Georgia and the Transcaucasus had been acquainted with the production of iron already in the 11th-10th centuries B.C., but the spreading of skill in the production and propagation of that metal on the basis of local ore deposits [75] fell only to the 8th and first half of the 7th centuries B.C. and was certainly advantageous as compared with the making use of raw material brought here from the south, which had happened somewhat earlier.

On the basis of archaeological data from this period B. A. Šramko [76] accepts that "a second region of the most ancient knowledge of winning the iron ore was the central part of East Europe's plain, very rich in brown iron ore [...] Chronological data speak in favour of the view telling the independent development of oldest ferrous metallurgy in these regions, we moreover notice differences in most remote ways of winning ore, as well as the complete lack in the East European Plain (till the 8th century B.C.) of finds which would indicate the import or even the borrowing of forms of the production of Transcaucasian types." It should be stressed that accessible, but still very scarce finds of iron objects, are connected with cultures of the forest-steppe zones, mostly in the middle Volga Basin, and probably with the Chernoles Culture over the middle Dnieper,[77] particularly in its declining phase (II).

Till we manage, however, to discover places of iron production in the steppe and forest-steppe zones in the Dniester, Boh (Southern Bug) and Dnieper basins, or before finding a larger number of iron objects of the local origin, the mediation of Cimmerians in transferring the technological skill in producing iron westwards, towards the

Carpathian Basin, can be accepted only hypothetically. One more circumstance requires emphasizing here. We presume that mediators in spreading the technology of production of this new metal could have been only the producers themselves (specialists in this branch); it would therefore be necessary to first prove that there existed among Cimmerians such specialists as were bronze founders acting in their "*milieu.*"

In spite of the reservations mentioned, a hypothesis concerning the transfer of iron products and technical skills in this field, from the east to eastern part of the Carpathian Basin, has been lately accepted by the majority of researchers; it seems to be contemporary with a similar process in the Balkans and in the Alpine area.[78] It should be added here, that it was the Danube's meridional course that marked the borderline between eastern and western actings in this respect within the Carpathian Basin, at the same time the first iron objects should be expected to have occurred in the East-Alpine zone from at least the 8th century B.C.[79]

But while returning to the problem of transferring a number of iron products from the North Sub-Caucasus and Kuban to the west, it should be stressed that a large part of the "Pre-Scythian" objects from the area of the Carpathian Basin, and especially from the Hungarian Plain, shows typological differences in relation to similar ones from over the Volga and the area of Sub-Caucasus-Kuban. Unfortunately, at the present stage of research, we are unable to determine which of them were no doubt imports from the east, and which were local imitations in the Carpathian country. Many new cognitive elements may here be introduced by qualitative examination of the composition of the bronze raw material; it has been applied to the finds of that type only from the compass of the Lusatian Culture.[80] The fact of discovering just in this territory of a swo-dsheath belonging to the Ugra type and skipetaries, also certain differences in their forms in relation to similar objects from the east, would speak for the possibility of some of them having been produced in the compass of the Carpathian Basin.

Metallographic studies concerning the composition of bronze raw material, requiring also some knowledge of the technology of iron products, should be extended to all the accessible relic material, concerning the above mentioned categories from all the Carpathian Basin, including also the so-called Thraco-Cimmerian objects and all accessible relics from South-Eastern Europe, i.e. the Volga Basin and the Sub-Caucasus. Only gaining of so vast a comparative basis will allow acquiring great progress in further studies.

We shall here turn once more to suppositions forwarded recently by Bočkarev.[81] He accepts that the appearance over the higher and middle Volga of armament, determined by him to have been "Caucasian," should be connected with the moving in here of armed nomads, as happened in the steppe and forest-steppe zone of the northern coast of the Black Sea. Such an invasion and even the possibility of armed penetration into the Volga basin is by no means confirmed by archaeological finds, so treating this hypothesis with scepticism seems to be the right thing. Moreover the area of occurrence of local "Pre-Scythian" armament in the Sub-Caucasus and the Kuban steppes does not agree with the zone remaining in the compass of influence or the shifting of Cimmerians. Neither do the further remarks of this investigator, speaking of the chance of a transfer by means of successive raids of a certain number of ornaments and Kuban and Caucasian armament to the northern coast of the Black Sea, seem sufficiently convincing. We therefore conclude that certainly not all types of armament and parts of the horse harness occurring in the Caucasian-Koban and Carpathian area are represented in the zone of the northern Black Sea coast, either qualitatively or especially by their quantity.

In has further not been possible to find convincing arguments to clear the fact of appearance of the same or related elements of horse harness and particularly armament (mostly swords and daggers of Kabardino-Piatigorsk type) in two very distant concentrations — a larger one in the Sub-Caucasus and Kuban and a smaller one on the middle Volga and Kama. The statement however, telling the surprising agreement of these objects with the big hypothetical centres of bronze metallurgy in those times, i.e. the North Caucasian and the middle Volga centres (showing by the way considerable mutual acting on each other), seems to be here very helpful. The total amount of accessible archaeological materials disclosed in both these regions, shows great similarity of cultures, although the middle Volga centre displays closer connections with the Western and Southern Urals, which were successive centres of the then bronze metallurgy.

E. N. Chernykh's[82] observations seem to be instrumental here. They are supported by detailed archaeological studies and the knowledge of metal deposits in Northern Europe, and undertake the attempt at determining the range of influence of contemporary metallurgical centres at the beginning of the first millennium B.C. They lead therefore to the undoubtful conclusion that the "Caucasian centre" had been linked through the middle Volga and Kama centres with an important centre situated in the Southern Ural regions. Were it so

indeed, we should have acquired a partly answer to the question put above, concerning the likeness of the mentioned "Pre-Scythian" armament in both regions of Eastern Europe. It should moreover be added, that the so-called Koban products show a much vaster range of occurrence over nearly the whole of eastern Europe, reaching in the northwest not only the eastern Baltic coast, but appearing also in Swedish territories.[83] There probably were held closer contacts between the Caucasus and the Baltic Sea, connected with the transfer of amber, common in the Caucasian region. It was therefore not only the share of Cimmerians in spreading "Pre-Scythian" products.

It is probably in the context of a far-reaching influence of these metallurgical centres that the appearance in the compass of Lusatian Culture of those, certainly Siberian type knives and the reputed Siberian dagger from Czermno should be investigated. Worth attention are A. I. Terenožkin's [84] observations on the growth of the South-Western Siberia's influence westwards at the beginning of the first millennium B.C. Although the so-called Siberian relics are very scarce indeed in the area of the Northern Black Sea coast and the forest-steppe part of Ukraine, in the Pre-Scythian phase, they are nevertheless clearly distinct among other finds in this territory. Also this problem has not been sufficiently studied in the hitherto research; it may not be overlooked in our reflections on account of the finding of both the knives at Strzegom and probably Śmiełów. Let it moreover be reminded that already somewhat earlier late-bronze products of the so-called Sejma-Turbino type (West Urals) had been reaching west as far as the middle Dniester, confirming thus the existence of far-reaching contacts that omitted the steppe zone of the Black Sea coast,[85] reaching east as far as Krasnoyarsk (the Minusinsk Basin).

Late in the 7th century B.C. there occurs in the steppe zone, over the northern coast of the Black Sea, an essential change of the culture aspect and ethnic composition, due to the arrival of Scythians. It is the beginning of the Scythian period (early phase) for this part of Europe. We thus acquire chronological frames of the so-called Pre-Scythian period, lasting from the end of the 9th till the end of the 7th centuries B.C., stressing once again that it is not identical with the time of Cimmerians, but is understood only in a classifying and chronological sense. Whereas we should agree that in case of the steppe zone of the northern coast of the Black Sea it corresponded with the settlement there, in which we should see the ancient Cimmerian settlers. However, only few archaeological findings — those of the Simferopol and Novocherkassk types — are related with them and only with regard to them, we may speak of Cimmerian relics.

In the context of a probably "Cimmerian" acting in the north-west directions, we should also take account of discovered bronze cauldrons made of strips of a bronze sheet, riveted and found also in Podolia.[86] V. S. Bočkarev [87] when publishing his map illustrating the appearance of that type of kettles, clearly states that determining them as "Cimmerian" is only a convention, all the more so that other finds of early types of such kettles show distinct genetic bonds with the Srubna Culture of the Volga Basin.[88] Nevertheless they are certainly concentrated in the area of the northern Black Sea coast and forest steppe Ukraine, which is important if we attempt to link them with possible Cimmerian producers; three specimens from Kuban and two scattered over the lower and middle Volga reach out beyond this range. We know two such finds in the West: one from Antoniny and the other from an unknown locality in Podolia, from the circle of the Chernoles culture, however, unconnected with each other.[89] Both finds suggest a probable proof of Cimmerian acting on the area of Podolia and Volhynia, not reaching, however, the border of the Lusatian Culture settlement and limited to the environment of the Dnieper culture mentioned.

In the light of the above, we hardly feel convinced by the suggestions of M. Gimbutas,[90] speaking about the concealment of a great gold hoard at Michalkov (West Ukraine), connected with the so-called Thracian-Hallstatt culture, due to a Cimmerian's raid upon the West, through Podolia and North Moldavia. No traces of an armed Cimmerian penetration have so far been observed here.

In archaeological literature the problem of Cimmerians, or more, generally of the so-called Pre-Scythian acting from the east onto the area of the Carpathian Basin, in the 8th-7th centuries B.C., continues to be the object of a lively discussion. As it has lately been amply discussed in G. Gazdapusztai's [91] and V. Podborsky's [92] elaborations, moreover in a recent paper by the author of this article,[93] we shall limit ourselves here to the most important observations and hypotheses only.

Two points of view, which are after all complementary to each other, are now accepted in regard to the above discussed group of findings. According to the first, bilateral exchange contacts considerably increased in HaB between the North Sub-Caucasus (especially the territory of the Koban culture) and the Carpathian Basin; these were accompanied by, also bilateral, strong cultural acting.[94] G. Gazdapusztai[95] speaks of this fact in the following terms: — "*Die Völker des Kaukasus (so auch das Ethnikum der Kobanischen Kultur) führten schon im IX—VII Jahrhunderten v.u.Z. einen intensiven Handel mit den Be-*

wohner der Steppen. Demzufolge gelangten während des VIII—VII Jahrhunderten v.u.Z. die kaukasischen Bronzegegenstände, zusammen mit Eisengegenständen aus Urartu nach West bis in die Ukraine." This idea should be extended also to the area of the Carpathian Basin and to a considerable part of the Lusatian culture, with the exception of Urartu products that do not appear here.

The second point of view accepts the chance of some Cimmerian tribes' shifting from the East. Those tribes should be recognized as direct or indirect carriers of an inaccurately defined part of Caucasian and Volga products, as well as probable makers of the so-called Thraco-Cimmerian ones. The presence of ethnic elements from the East is proved by for example grave assemblages from Ártánd (although the latter may have also been the consequence of an earliest Scythian wave) and particularly from Pécs-Jakabhegy (Hungary), dated by the way to the second half of the 7th — beginning of the 6th centuries B.C., therefore to the time of the postulated shifting of Cimmerians from the East. However, in the light of the materials and of the Carpathian problems, the extent of that shift should be substantially reduced: instead of the postulated invasion, which was to penetrate a considerable part of the Central Europe and the Balkans, we accept a possibility of an infiltration, — which from the military point of view, was less significant than on the cultural scale. The question remains open: Was it limited to the decadent phase of Cimmerian history, i.e. to the turn of the 7th century B.C., or had it occurred still earlier, say the 8th century B.C.? We have grounds to rather accept this last possibility, i.e. a small-scale infiltration through the East Carpathians, during the whole of the 8th and 7th centuries B.C. Our suppositions must, however, still remain at the stage of hypotheses.

Written sources unluckily bring very little information on the question of Cimmerians shifting West, from the area of the northern coast of the Black Sea. Herodotus (IV, 11 and 13) explicitly speaks of Cimmerians being obliged to desert those steppes, owing to the pressure of Scythians; the latter finally took hold of that territory at the end of the 7th century B.C. The event noted down by Herodotus — the fratricidal battle of the Cimmerians living on the nothern Black Sea coast that took place on the Dniester (Tyras) — can be a ground to draw a conclusion that the hitherto inhabitants of that territory (Cimmerians) had left their home standing face to face with the Scythian threat. From there the shortest way of flight should have led not eastwards, for it had already been barred by Scythians, but just westwards. In ancient written sources it is in fact the only known, vague premise. Should it, however, be the right conclusion, it might

simultaneously clear and confirm the dating of some assemblages (graves, hoards) bearing an eastern stamp, particularly in the Great Hungarian Plain, to the turn of the 7th century B.C.

Let us moreover quote V. Podborský's standpoint,[96] which in our opinion generally characterizes the attitude of researchers in determining the role of the "Cimmerian" element: — "*Man darf aber auch weiterhin nicht mit Masseneinfällen der Kimmerier gegen den Westen in Sinne der Auffassung St. Foltiny's rechnen; vieles muss man eher durch die Kontakte zwischen den einzelnen Stämmen und durch ökonomische Beziehungen zwischen beiden Gebieten* [e.g. the North Caucasus and the Carpathian Basin — Z. B.] *sowie durch die mögliche Beeinflussung der materiallen Kultur beider Gebiete aus Vorderasien erklären* [...]."

It seems, however, that the mediation of the so-called Cimmerian colonization from over the North Pontic area was more important if we take other premises into account. Formulating such an attitude is justified by the fact of an occurrence of the above discussed armaments in two (or three) distinct concentrations; it is true, not many have been disclosed in the area of the northern coast of the Black Sea, but we do not either know in this zone many assemblages and finds bearing an undoubtful Cimmerian character. It seems that exactly this zone was the mediator between the East and the West in the exchange of the so-called Pre-Scythian armaments. The mediation of the Srubna culture population of Byelozierka phase, from over the northern coast of the Black Sea, should here be excluded, since from the end of the 9th century B.C. that culture in this zone has not been registered any more; the forest-steppe cultures Byelogrudovka and Chernoles, from the territory of Central Ukraine, should also be excluded, since this type of finds is very scarce there. The role of the latter is certainly overestimated, although materials connected with it do not allow the attitude assumed in this matter particularly by A. I. Terenožkin. Quite different is the question of horse harness elements which occur on a large territory and are known from many assemblages in the northern coast of the Black Sea. I have drawn attention to these differences above.

The suggestion concerning production of armament by Cimmerians, and such is the role ascribed to them by for example A. I. Terenožkin in respect to daggers and swords of Kabardino-Piatigorsk type, should be rejected, as being too weakly grounded. I shall remind once more that in the so-called Pre-Scythian phase, bronze and ferrous metallurgies reached a high degree of development in many centres of South-Eastern Europe. Moreover, in the light of the hitherto metal-

lographic studies, we observe ever more distinct connections between particular centres, though their ranges were diverse: the centres of Sub-Caucasus and Kuban were strongly influenced by the Transcaucasus, while those of the Volga and Kama basins kept close connections with great metallurgical centres in the Urals and were influenced by the centres of South-Western Siberia.[97] Above we have drawn attention to the fact that, with the exception of a part of the area of Kuban steppes, these centres could not have remained in the sphere of the Cimmerian settlement, which, however, does not prevent the hypothesis on the latter having been a mediator in a widely conceived exchange. By the above remarks I wish to cut myself off the hypothesis telling the Cimmerian origin of the objects characteristic of the so-called Pre-Scythian phase: various categories of armament, parts of the horse harness and a few ornaments that are the subject of this article.

The analysis of the accessible, so-called Pre-Scythian finds (or objects of eastern origin) from the area of the Carpathian Basin and the adjacent southern zone of the Lusatian Culture, allows to eliminate three groups, differentiated by their origin. The first two are represented by the same or very similar relics, their differentiation consists in the form of their being transferred from the East to the West. They show close connections with the North Subcaucasus, Kuban and the middle Volga and Kama area, but are only sporadically met in the area of the northern coast of the Black Sea. The character of assemblages in which they have been disclosed permits of, in relation to some of them, the possibility of smaller groups of strange origin to have moved (infiltrated) into the eastern part of the Carpathian Basin; at the same time these assemblages to a large extent fall to the decline of the so-called Pre-Scythian phase, i.e. to the turn of the 7th century B.C. Those shifts did not embrace, however, either the Lusatian Culture (the complex of Liptov excluded) or the neighbouring western regions of Podolia and Volhynia. As regards the Carpathian Basin they had not the character of invasion but of infiltration rather, not stepping out of the eastern part of the Basin. A reflection of the above can be found in grave assemblages and hoards, mostly those of the Hungarian Plain,[98] differing by the character of their inventory, dated only from the second half or the end of the 8th century B.C. That part of finds forms the first group. There is a great probability in treating infiltrating groups as Black Sea Cimmerians.

Parallelly occurred the second group of "eastern" finds, coming no doubt from the North Subcaucasus, Kuban and the middle Volga

basin, characteristic also of the Lusatian Culture, but appearing in Central Europe surely earlier than the former. As the above mentioned regions of South-Eastern Europe cannot be included into the compass of "Cimmerian" settlement, the appearance of the finds mentioned will have to be explained by mutual exchange contacts; the mediation of Cimmerians is, however, not excluded and it is just with them that I would associate both the objects of probably Asiatic origin, such as dagger No. 2 from Klein Neundorf and the gold bracelet from Miecznikowo. These finds do not prove the shifting of strange ethnic groups, but confirm far-reaching contacts with the East, started already at the beginning of the 8th century B.C. An exact knowledge of the mechanism of this exchange is not attainable at the present stage of research, as the steppes of the northern Pontic have not provided sufficient quantities of representative finds. On the other hand we have no doubts as to the considerable volume of that exchange that will have to be studied in the context of extensive, bilateral cultural contacts: the Caucasus — the Carpathians.

Numerous products of the discussed type from the Carpathian Basin should also be included into the second group of findings, suspected of being made on the spot after eastern models. On account of the impossibility of distinguishing them or determining the place of their production before undertaking specialistic research (metallographic analyses), we do not eliminate this part of relics to a separate group.

Bronze products, mostly elements and ornaments of the horse harness, determined as so-called Thraco-Cimmerian ones,[99] but being probably of local Carpathian-Danubian origin — form the third group of finds from the area of the Carpathian Basin. These objects, as already mentioned are only sporadically found in the area of the Lusatian Culture and are met exclusively in its southern periphery: Moravia and Slovakia; they are frequent in the culture of the so-called Thracian Hallstatt, over the upper and middle Dniester. This entitles us to confine ourselves to these remarks only.

In connection with the disclosure of this type of elements of a horse harness in the East, in the northern coast of the Black Sea and still farther, observations by T. Sulimirski[100] are worth quoting: "Perhaps the remains of so-called 'Thraco-Cimmerian' type found in the North-West Caucasus and in the country along the Sea of Azov up to the Don may be connected with the Cimmerians." But next he adds: "These remains have been attributed to the Sindians and

Maeotians, but the origin of these peoples is unknown, and one or the other, or both, might have been a branch of the Cimmerian. Further studies and research are undoubtedly needed to solve this dilemma." These remarks clearly indicate the difficulties that still face researchers interested in the problem of Cimmerians in the area northwards of the Black Sea.

On account of the necessity of understanding the term "Thraco-Cimmerian" only in the chronological and classifying and not ethnic character, I propose to limit it only to the third group of the relics discussed in this article yet. I should name the first two groups "Pre-Scythian" (and by no means "Cimmerian"!) meaning both the chronology and their undoubtful eastern make. This opinion should be based on the fact that their Cimmerian origin has not been proved as yet and either has the Thracian character of the population of Moldavia, of a large part of the Dniester country, or of the north-southern part of the Carpathian Basin. The character of this part of the population so determined in literature should be accepted in a conventional sense. Neither have close connections of these relics with Cimmerians been proved, while many investigators recognize even their Thracian origin (!). Instead, we should distinguish the impacts of a clearly eastern origin from the objects of local manufacture coming from the Carpathian area, conventionally called "Thraco-Cimmerian."

Summing up the above remarks, we should state that in respect to the so-called Pre-Scythian finds from the area of the Lusatian Culture (and a large part of finds from the Carpathian area), we lack grounds to recognize their direct Cimmerian origin. The typologic and chronological analysis of the discussed categories of products, nearly exclusively metal ones, indicates that in the so-called Pre-Scythian phase (second half of the 8th — end of the 7th centuries B.C.), there existed cultural and exchange contacts between the Volga basin and Sub-Caucasus — Kuban on the one hand, and the Carpathian Basin on the other, but their mechanism is still not possible to determine. It is, however, not unlikely that those contacts may have been accompanied by ethnic shifts from the East, into the eastern part of the Carpathian Basin more or less to the Danube run); a part of the discussed complexes may be connected with strange newcomers, probably Cimmerians, infiltrating into that region from the East. Grave inventories and hoards with military accessories and parts of the horse harness from the Carpathian Basin, not containing

local, "Carpathian" elements, seem to justify that conclusion. It is probably due to cultural contacts with the Caucasus area and the penetration of the hypothetical Cimmerians that the eastern part of the Carpathian area already in HaB 3 acquired the knowledge of iron and the technology of its production, basing on local deposits of the iron ore. Rare finds (cauldrons) linked probably with the Cimmerian "*milieu,*" disclosed in the West only in the area of Podolia, seem to indicate its limited acting towards the North-West, not reaching yet the border of the Lusatian Culture settlement (Tarnobrzeg and Wysocko groups).

In the extention of the so-called Pre-Scythian relics as well as of some allegedly Asiatic and of a few so-called Thraco-Cimmerian ones over the area of the Lusatian culture, the mediation of the then existing settlement in this part of the Carpathian Basin, should be accepted. At the same time, we have no bases to accept a possibility of the local imitation of those impacts within the "Lusatian" environment.

One more observation requires stressing here. The so-called Pre-Scythian finds, directed West, virtually reach the Danube run that flows meridionally in the middle part of the Carpathian Basin, therefore not at all entering into the compass of the Alpine circle settlement of Illirian and Protoceltic characters. The finds mentioned are limited to the southern zone of the Lusatian Culture and the eastern part of the Carpathian Basin exclusively the latter being inhabited by groups of a Thracian character. In contradistinction to the so-called Pre-Scythian ones, finds determined to be "Thraco-Cimmerian," occur in all the Carpathian Basin, reaching Switzerland and Bavaria to the West, the Sub-Caucasus to the East, Macedonia and Bulgaria to the South. To the North, only few relics embrace the southern zone of the Lusatian Culture.

Therefore if we speak of the role of the supposed Cimmerians in spreading parts of the horse harness and armament in the areas of the northern coast of the Black Sea and the Carpathian Basin, it may have only been the role of the mediator and not producer, and this does not empower us to define these objects as "Cimmerian." It is also to hypothetical Cimmerians that the role of bringing the knowledge and the technology of the iron production to the eastern part of the Carpathian area may be ascribed, at the same time as its western part has been acquainted with iron by the mediation of Illirians and Protocelts.

NOTES

[1] I speak widely about it in the monograph: Z. Bukowski, *Studia nad południowym i południowo-wschodnim pograniczem kultury łużyckiej* [Study on the South and South-Eastern Zones of Lusatian Culture, Wrocław—Warszawa—Kraków 1969, *passim*, there you will find literature and maps 4 and 5; idem, *Bemerkungen zur Problematik der südlichen und südöstlichen Zone der Lausitzer Kultur*, in: *Beiträge zur Lausitzer Kultur*, Berlin 1969, p. 68.

[2] Bukowski, *Studia...*, map 5; V. Podborský, *Mähren in der Spätbronzezeit und an der Schwelle der Eisenzeit*, Brno 1970, map at the end.

[3] T. Sulimirski, *Die thrako-kimmerische Periode in Südostpolen*, "Wiener Prähistorische Zeitschrift," Vol. XXV, 1938, p. 129 ff.

[4] L. Kozłowski, *Zarys pradziejów Polski południowo-wschodniej* [Outline of the Prehistory of South-Eastern Poland], in: *Polska Południowo-Wschodnia* [South-Eastern Poland], Lwów 1939, vol. I, p. 70 table 20 and p. 73 ff.; J. Kostrzewski, *Od mezolitu do okresu wędrówek ludów* [From the Mesolithic to the Period of Peoples' Migrations], in: *Prehistoria ziem polskich* [Prehistory of Polish Lands], Kraków 1939, p. 251 ff.

[5] J. Nestor, *Ein Bronze-Depot aus Moigrad*, "Praehistorische Zeitschrift," Vol. XXVI, 1935, p. 56.

[6] S. Gallus, T. Horváth, *Un peuple cavalier préscythique en Hongrie*, Budapest 1939. Dissertationes Pannonicae, ser. II, No. 9, *passim*. We have here another complementing work, see: J. Harmatta, *Le problème Cimmérien*, "Archaeological Értesito," Vol. III, ser. 7—9, 1946—1948, p. 79 ff., particularly p. 109 — containing the analysis of flanks.

[7] F. Holste, *Zur Bedeutung und Zeitstellung der sogenannten "thrako-kimmerischen" Pferdegeschirrbronzen*, "Wiener Prähistorische Zeitschrift," Vol. XXVII, 1940, p. 7 ff.

[8] Idem, *Zur Chronologie der Südosteuropäischen Depotfunde der Urnenfelderzeit. Ein Vortragsmanuskript aus dem Jahre 1939*, Marburg-Lahn 1962, p. 15.

[9] A. A. Essen, *K voprosu o pamjatnikach VIII—VII vv. do n.e. na juge evropejskoj časti SSSR*, "Sovetskaja Arheologija," Vol. XVIII, 1953, p. 49 ff., p. 53 — comparison of types. Unluckily the work does not contain a cartographic approach to the subject. See also by idem, *Nekotoryje pamjatniki VIII—VII vv. do n.e. na Severnom Kavkaze*, in: *Voprosy skifo-sarmatskoj arheologii*, Moskva 1954, p. 112 ff., where parts of the horse harness of the 8th-7th cent. B.C. are discussed as well as the types of some bits, and maps of their range of Eastern Europe (see p. 128 fig. 16 and 17 — maps).

[10] G. Kossack, *Pferdegeschirr aus Gräbern älteren Hallstattzeit Bayerns*, "Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz," Vol. I, 1953 (1954), p. 111 ff., particularly map No. 2 on p. 123 and map No. 3 on p. 125 and map No. 4 on p. 132, p. 147 fig. 14a — comparison of types, and p. 156 ff. — comparison of finds.

[11] S. Foltiny, *Zum Problem der Kulturbeziehungen zwischen den mittel- und südosteuropäischen Reitervölkern und Bevölkerung Nord-italiens am Beginn der Früheisenzeit*, "Mitteilungen der Anthropologischen Gesellschaft Wien," Vol. XCII, 1962, p. 112 ff.

[12] See e.g.: K. Vinski-Gasparini, *Kultura polja sa žarama u sjevernoj Hrvatskoj*, Zadar 1973, pp. 150 and 210, which connects changes occurring in the

8th cent. B.C. and the appearance of the discussed types of the harness in Croatia, among others with ethnic alterations.

[13] Bukowski, *Elementy wschodnie w kulturze łużyckiej u schyłku epoki brązu* [Eastern Elements in Lusatian Culture at the Decline of the Bronze Age], Wrocław—Warszawa—Kraków—Gdańsk 1976, *passim; ibidem,* publication of those and further discussed materials from the area of Lusatian Culture, the literature on the subject and detailed typologic and chronological analysis.

[14] Sulimirski, *Aegean Trade with Eastern Europe and Its Consequences,* in: *Mélanges de préhistoire, d'archéocivilisation et d'ethnologie offerts à André Varagnac,* Paris 1971, p. 711.

[15] J. Vládar, *Osteuropäische und mediterrane Einflüsse im Gebiet der Slowakei während der Bronzezeit,* "Slovenská Archeológia," Vol. XXI, No. 2, 1973, p. 253 ff., particularly p. 297 ff.

[16] J. Dąbrowski, *Powiązania ziem polskich z terenami wschodnimi w epoce brązu* [Connections of Polish Lands with Eastern Territories in the Bronze Age], Wrocław—Warszawa—Kraków—Gdańsk 1972, p. 204 ff.

[17] Discoveries in 1973. Unpublished materials.

[18] M. Gedl, *Problematyka wczesnej grupy tarnobrzeskiej* [The Problem of the Early Tarnobrzeg Group], "Materiały i Sprawozdania Rzeszowskiego Ośrodka Archeologicznego za lata 1968—1969," Rzeszów 1973, p. 28 ff.

[19] *Starodavne naselenija Prykarpattja i Volyni,* Kiev 1974, p. 190 ff.

[20] See: Dąbrowski, *op. cit.,* p. 121 fig. 16 — map and p. 153 ff.

[21] Bukowski, *Studia nad...,* maps 3 and 4.

[22] Kozłowski, *op. cit.,* table 20,6.

[23] See e.g.: *Starodavne naselenija...,* p. 197 fig. 51 — map of Noua Culture finds, showing its westernmost sites in the neighbourhood of Lvov, and p. 202 fig. 53 — map showing cultures of the Transcaucasus and over the Dniester in the late Bronze Age, distinctly marking Felsöszöcs-Stanove culture in the Transcarpathian region, separating from the south the settlement of Lusatian Culture in the San basin, from the Noua culture in Transylvania.

[24] Sulimirski, *Die thrako-kimmerische Periode..., passim.*

[25] For a detailed elaboration of the Lusatian culture see: Bukowski, *Scythian Influence on the Territory of Lusatian Culture* (monograph — in print).

[26] Materials as well as the very problem have been elaborated in detail in a special monograph, see: Bukowski, *op. cit., passim.* The monograph contains new, recently supplemented maps showing the range of daggers and swords of the Kabardino-Piatigorsk type, ferrules of the sword sheath (so-called shoes), belonging to the Ugra type and the so-called Szepter *(skipetaries).*

[27] F. Pfützenreiter, *Oberschlesische Bronzeschwert,* "Altschlesien," Ann. 6, 1935—1936, p. 77 and fig. 1 and 2 and table 6, 1—2; V. Podborský, *Štramberská dýka s křižovým jilcem a otázka rozšíření původu a datování těchto dýk v Evropé,* "Archeologické rozhledy," Ann. 19, 1967, p. 202 ff., 211 fig. 59, 1 and p. 216 fig. 62, 1. Older literature included.

[28] Podborský, *op. cit.,* p. 194 ff., p. 207 fig. 57, 1 and p. 262 fig. 62, 2.

[29] H. Seger, *Beiträge zur Vorgeschichte Schlesiens,* "Schlesiens Vorzeit in Bild und Schrift," N.S., Vol. V, 1909, p. 13 ff. and p. 15 fig. 16 — right; also W. Coblenz, *Zum Dolchfund von Klein Neundorf, Kreis Görlitz,* "Arbeits- und Forschungsberichte zur sächsischen Bodendenkmalpflege," Vol. XVI/XVII, 1967, p. 267 ff. and p. 270 fig. 1.

[30] Podborský, *Mähren in der spätbronzezeit...*, p. 153 ff. and 155 fig. 25 (Gamów-Berezovka variant), p. 157 fig. 26 (Goloviatino-Leibnitz variant).

[31] Seger, *op. cit.*, p. 14 ff. and p. 15 fig. 16 — left; also Coblenz, *Zum Dolchfund...*, pp. 268 and 271 fig. 2.

[32] See the specimen from Luristan kept in the collection of the Museum für Frühgeschichte in Frankfurt/Main, inv. No. ss 486 and specimens from the region Talyš in South-West Iran, see: F. Hančar, *Caucassus-Luristan. Züge kultureller Verwandschaft des prähistorischen Kaukasusgebietes mit dem Alten Orient,* "Eurasia Septentrionalis Antiqua," Vol. IX, 1934, p. 67 fig. 20; 2. For another specimen from the "Amlash" region, representing the Marlik type, see: P. Calmeyer, *Altiranische Bronzen der Sammlung Bröckelschen. Catalogue: Museum für Vor- u. Frühgeschichte,* Berlin 1964; there also the publication on that specimen and a photograph without mentioning pages.

[33] J.-L. Huot, *Des origines aux Achéménides,* in the series: Archaeologia mundi, Genève 1965, fig. 90.

[34] H. Wiklak, "Inventaria Archaeologica, Pologne," Łódź 1963, fasc. 9, table 47. For the only distant analogies from South-West Siberia for the first of the specimens see: F.-R. Martin, *L'age du bronze au musée du Minoussinsk,* Stockholm 1893, table 21 — specimen from "Oust-Erbinsk."

[35] Z. Podkowińska, *Miecze brązowe z Wojciechowic w pow. jędrzejowskim w woj. kieleckim* [Die Bronzeschwerter von Wojciechowice, Kr. Jędrzejów, Wojewodschaft Kielce], "Światowit," Vol. XV, 1932—1933, p. 117 table 1; *1* and p. 118; recently J. Dąbrowski has also accepted the eastern origin of that specimen (Dąbrowski, *op. cit.*, p. 205).

[36] See: Sulimirski, *Die Skythen in Mittel- und Westeuropa,* in: *Bericht über den V. Intern. Kongress für Vor- und Frühgeschichte-Hamburg 1958,* Berlin 1961, pp. 796 and 798 note 32 and table 92,1.

[37] T. G. Kovpanenko, *Pogrebienie VIII—VII vv. do n.e. v basseine r. Vorskli,* "Kratkie Soobshcheniya Instituta Arkheologii" (Kiev), 1962, No. 12, p. 70 and fig. 3.

[38] See also G. Jacob-Friesen, *Eine Pferdekopfkeule der frühen Eisenzeit aus Siebenbürgen,* in: *Studien zur europäischen Vor- und Frühgeschichte,* Neumünster 1968, p. 66, with an analysis of that type of finds (so-called *Pferdekopfkeule)* from the Carpathian Basin and map on p. 70. Also Podborský, *Mähren in der Spätbronzezeit..,* p. 170 ff.

[39] J. Eisner, *Slovensko v pravěku,* Bratislava 1933, p. 138 fig. 14, 6 and p. 152; Gallus, Horváth, *Un peuple cavalier...,* pp. 40 and 102 and table 44,2.

[40] L. Domečka, *Předměřice, bylansky žárový hrob,* "Památky archeologické," Vol. 33, 1922—1933, p. 239 and fig. 159; J. Werner, *Bronzenes Pferdekopfszepter der Hallstattzeit aus Předměřice bei Hradec Králove,* "Památky archeologické," Vol. LII, 1961, p. 384 ff. and p. 385 fig. 1, 3 and p. 388 fig. 3, 2.

[41] V. A. Ilinskaja, *Kultovye železy skifskogo i predskifskogo vremeni,* in: *Novoe v sovetskoj arheologii,* Moskva 1965, vol. 130, p. 206 ff. Materialy i isledovanija po arheologii SSSR.

[42] Podborský, *Jihomoravská halštatská sídliště — II,* "Sbornik Praci Filosofické Fakulty Brněnské University," — E 17, 1972, table 4, 18—19 — without mentioning the place of finding. See analogies A. I. Meljukova, *Vooruženje Skifov, Svod arheologičeskih istočnikov, Arheologija SSSR,* D 1—4, Moskva 1964, p. 9 ff. and table 1A 3—15 and 25.

[43] Podborský, *Jihomoravská halštatska sídliště — I*, "Sborník Prací Filosofické Fakulty Brněnské University," Vol. XVIII (E XV), 1970, tables 5, 20—21.

[44] See V. I. Bidzilja, E. V. Jakovenko, *Kimmerijskie pogrebenija Vysokoj Mogily*, "Sovetskaja Arheologija," 1974, No. 1, p. 155 and fig. 9, 25—28.

[45] M. Jahn, *Die Skythen in Schlesien*, "Schlesiens Vorzeit in Bild und Schrift," N. S., Vol. IX, 1928, p. 20 ff. and p. 21 fig. 8 and 9.

[46] See for instance J. S. Grišin, *Metalličeskie izdelija Sibiri epohi eneolita i bronzy, Svod arheologičeskih istočnikov, Arheologija SSSR*, W 3—12, Moskva 1971, p. 13 ff. and tables 4 and 17 — comparison.

[47] See A. I. Terenožkin, *Preskifskij period na Dneprovskom Pravoberežje*, Kiev 1961, p. 186 fig. 113, 1—2 and p. 202, where the author stresses: "Authentic Siberian antiquities are also known in the south of Eastern Europe, in the form of single finds. A bronze bent knife with a link on the hilt, of the Karasuk type, was found at Bozhigan, Georgian SSR (fig. 113, 1)." For the second knife he publishes, the author does not give the place it has been found.

[48] Podborský, *Mähren in der Spätbronzezeit...*, pp. 153 ff. and 169.

[49] *Ibidem*, pp. 26, 163 ff. and tables 73 and 76, 1—4. Older literature included.

[50] Seger, *Depotfunde aus der Bronze- und Hallstattzeit*, "Schlesiens Vorzeit in Bild und Schrift," N. S., Vol. IV, 1907, pp. 35 ff. and 37 fig. 59; also B. Gediga, *Plemiona kultury łużyckiej w epoce brązu na Śląsku środkowym* [Tribes with Lusatian Culture in Middle Silesia in the Bronze Age], Wrocław—Warszawa—Kraków 1967, p. 167 ff., p. 218 fig. 62 and p. 315 pt. 223.

[51] P. Reinecke, *Die Originalaltertümer in der Sammlung des Römisch-Germanischen Zentralmuseums in Mainz*, "Mainzer Zeitschrift," Vol. II, 1907, p. 40 ff. and p. 42 fig. 5 — recognized to be assemblage of Kisköszeg. Distinguishing them as the assemblage "of Liptov" is due to Foltiny, *Über die Fundstelle und Bedeutung der angeblich aus Kisköszeg stammenden hallstattzeitlichen Bronzen des Römisch-Germanischen Zentralmuseums in Mainz*, "Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz," Ęol. 8, 1961, p. 179 ff. and tab. 69 and 70.

[52] See Bukowski, *Elementy wschodnie...*, p. 29 ff. and tables 12—13. Typologic and chronological analysis concerning the locality "Region Liptov."

[53] See M. Ebert, *Reallexikon der Vorgeschichte*, Berlin 1927, vol. XI table 87x.

[54] Gediga, *op. cit.*, p. 391 pt. 744 "Wojszyce."

[55] See Sulimirski, *Kultura łużycka a Scytowie* [La culture Lusacienne et les Scythes], "Wiadomości Archeologiczne," Vol. XVI, 1939, p. 80 pt. 17 and p. 86 ff.; also W. Hensel, *Polska starożytna* [Ancient Poland], Wrocław—Warszawa—Kraków—Gdańsk 1973, p. 269 fig. 240, 4.

[56] L. Franz, *Ein Tierkopfring aus Armenien*, in: *Serta Hoffileriana*, "Viestnik Hrvatskoga Arheološkoga Društva," N.S., Vol. XVIII—XXI, 1937—1940, p. 83 ff.; see also A. Godard, *Les bronzes du Luristan*, Paris 1931, p. 65 ff. and tables 27, 85; 28, 93 — golden specimens of the so-called Luristan type, finished with little stylized heads of birds of prey. The author clearly indicates here the influence of Mesopotamia.

[57] B. Brentjes, *Zur Datierung des Rings von Vogelgesang*, "Varia Praehistorica," No. 2, Leipzig 1957, p. 95 ff.

[58] Bukowski, *op. cit.*, p. 118 f.

[58] I appeal here to the detailed lists of Podborský, *Jihomoravská halštatska sídliště*, p. 147 ff., particularly p. 152 ff. — list and p. 168 fig. 27 — map presenting the range of daggers and swords Kabardino-Piatigorsk type and the fittings of

sword-sheath (so-called shoes) Ugra type; Jacob-Friesen, op. cit., p. 66 ff. and p. 70 fig. 4 — map of skipetary battle-axes in the Carpathian Basin. Also detailed work by Bukowski, *op. cit., passim* and maps 1—4.

[60] Essen, *K voprosu...*, p. 98 table 3.

[61] *Ibidem*, p. 97 ff.

[62] They are mentioned by N. V. Anfimov, *Osnovnye ėtapy razvitija meotskoj ėpohi rannego železa na severo-zapadnom Kavkaze*, in: *Actes du VIIe Congrès International... Prague 21—27 août 1966*, Praha 1971, vol. I, p. 176 ff.

[63] Bukowski, *op. cit.*, p. 57 ff. and maps 1—3.

[64] Gallus, Horváth, *op. cit., passim*, with an analysis and division into types; see also Kossack, *op. cit.*, p. 111 ff., with their detailed characteristics and maps of the range of particular types; also Podborský, *op. cit.*, p. 153 ff., with an analysis and basic literature.

[65] See also Kossack, *op. cit.*, p. 125 map 3 and p. 133 map 5 and p. 158 ff. — list. Moreover, many new findings, not mentioned in this work.

[66] E.g. A. M. Leskov, *Predskifskij period na stepjah Severnogo Pričernomorja*, in: *Problemy skifskoj arheologii*, "Materialy i issledovanija po arheologii SSSR," Vol. CLXXVII, Moskva 1971, p. 76 ff.

[67] O. A. Krivtsova-Grakova, *Stepnoje Povolže i Pričernomore w ėpohu pozdnej bronzy*, "Materialy i issledovanija po arheologii SSSR," Vol. XLVI, Moskva 1955, p. 164 — map; also Sulimirski, *Prehistoric Russia. An Outline*, Dublin 1970, p. 318 map 29 and p. 395 ff.

[68] E. N. Černyh, *Istorija drevnejšej metallurgii Vostočnoj Evropy*, "Materialy i issledovanija po arheologii SSSR," Vol. CXXXII, Moskva 1966, p. 89 fig. 4; also Sulimirski, *op. cit.*, p. 276 and 279 map 22.

[69] See E. I. Krupnov, *Drevnjaja istorija Severnogo Kavkaza*, Moskva 1960, p. 67 fig. 4 — map.

[70] V. S. Bočkarev, *Kimmerijski kazani*, "Arheologija," fasc. 5, Kiev 1972, p. 63 ff., especially p. 68.

[71] Sulimirski, *Les archers à cheval, cavalerie légère des anciens*, "Revue Internationale d'Histoire Militaire," Vol. III, No. 12, 1952, p. 447 ff., especially p. 455 ff. and tables 2, 3 — relief from the palace of Nimrud from the years 885—859 B.C.; idem, *Scythian Antiquities in Western Asia*, "Artibus Asiae," Vol. XVII, 1954, p. 282 ff., particularly p. 288 ff.

[72] I. M. Djakonov, *Istorija Midii*, Moskva—Leningrad 1956, p. 236; also Sulimirski, *Prehistoric Russia...*, p. 396 ff.

[73] A. I. Terenožkin, *Načalo železnogo veka na juge evropejskoj časti SSSR, Tezisy VI naukovoj konferencii Instituta Arheologii AN SSSR*, Odessa 1972, *passim*.

[74] G. Gazdapusztai, *Beziehungen zwischen den prähistorischen Kulturen des Karpatenbeckens und des Nord-kaukasus (Beiträge zum sogenannten Kimmerierproblem)*, "Acta Universitatis de Attila József nominatae," Vol. V, Szeged 1963, p. 5 ff.

[75] See R. M. Abramishvili, T. K. Mikeladze, *K istorii osvoenija železa v Zakavkaze i Maloj Azii*, in: *Actes du VIIe Congrès International... Prague, vol. I*, Praha 1970, p. 31.

[76] B. A. Šramko, *Dobyča i obrabotka železa u plemen Skifii v VII—IV vv. do n.e.*, in: *Actes du VIIe Congrès International... Prague*, vol. I, Praha 1970, p. 108.

[77] See e.g. Terenožkin, *Preskifskij period na Dneprovskom Pravoberežje*, Kiev 1961, pp. 119 and 191 — without, however, giving closer data on the localities of production.

[78] See D. Berciu, *Este şi o cale Cimmeriană în difuzionea metalurgiei fierului? "Studii şi Cercetări de Istorie Veche,"* Vol. XIV, 1963, p. 395 ff.; S. Piggott, *Iron Cimmerians and Aeschylus*, "Antiquity," Vol. XXXVIII, 1964, p. 300 ff.; Bukowski, *Studia nad...*, p. 116 ff.

[79] Foltiny, *Athens and the East Hallstatt Region: Cultural Interrelations at the Dawn of the Iron Age*, "American Journal of Archaeology," Vol. LXV, 1961, p. 283 ff. and p. 296, where he speaks about finds from ca. 800 B.C.; J. Alexander, *Greeks, Italians and the Earliest Balkan Iron Age*, "Antiquity," Vol. XXIV, 1962, p. 123 ff.; also W. Kimmig, *Seevölkerbewegung und Urnenfelderkultur*, in: *Studien aus Alteuropa*, vol. 1, Köln-Graz 1964, p. 234 ff., especially pp. 241 ff., 244 fig. 13 — map for HaA-HaB and p. 274 ff. — the listing and dating of finds.

[80] See Bukowski, *Elementy wschodnie...*, annex No. 1 "The Results of Metallographic Analysis."

[81] Bočkarev, *op. cit.*, p. 67.

[82] Černyh, *op. cit.*, p. 89 fig. 4 — map.

[83] Sulimirski, *op. cit.*, p. 366 map 32.

[84] Terenožkin, *op. cit.*, p. 166 ff.

[85] Sulimirski, *op. cit.*, p. 282 map 24 and p. 349 fig. 81 — top right: a small axe and spear-head of this type from the locality Karabczyjów near Kamenets Podolsk (U.S.S.R.).

[86] W. Antoniewicz, *Les chaüdières préscythiques en bronze*, "Archaeologia Polona," Vol. I, 1958, p. 57 ff.; Terenozhkin, *Der Bronzekessel des Odessaer Museums*, "Mitteilungen der Anthropologischen Gesselschaft Wien," Ann. 92, 1962, p. 272 ff., and p. 275 fig. 2, 7 and 8 — where schematic drawings unluckily present them falsely, not showing their making out of tapes and riveting.

[87] Bočkarev, *op. cit.*, p. 63 ff., with literature and a characteristics of finds, and p. 64 fig. 1 — map. The below mentioned "Srubna" specimen from Domashka presents a primitively finished specimen that clearly differs from the remaining finds (as type A in Bočkarev's works, op. cit., p. 65 fig. 2A).

[88] K. V. Salnikov, *Očerki drevnej istorii Južnogo Urala*, Moskva 1967, p. 157 fig. 18 — specimen from the locality of Domashka.

[89] This is not distinctly marked in A. I. Terenožkin's monograph *Predskifskii period..., passim.*

[90] M. Gimbutas, *The Treasure of Michalkov*, "Archaeology," Vol. XXII, 1959, p. 84 ff.

[91] Gazdapusztai, *op. cit.*, p. 5 ff.; idem, *Caucasian Relations of the Danubian Basin in the Early Iron Age*, "Acta Archaeological Academiae Scientiarum Hungariacae," Vol. XIX, 1967, fasc. 3—4, p. 307 ff., particularly p. 332 ff. and a chronological table on p. 332.

[92] Podborský, *Mähren in der Spätbronzezeit...*, p. 147 ff., he also places general remarks on the so-called Thraco-Cimmerian horizon and the Cimmerians' role in this territory, giving basic literature moreover.

[93] Bukowski, *op. cit.*, *passim.*

[94] F. Hančar, *Hallstatt und der Ostraum (Ein Beitrag zur Klärung des Kimmerierproblems)*, in: *Sbornik Gavrilu Kacarovovi*, vol. I, Sofia 1950, p. 265 ff.; Gazdapusztai, *op. cit.*, p. 5 ff.

[95] Gazdapusztai, *Zusammenhänge der Kulturen der Ungarischen Tiefebene und des Nordkaukasus in der Skythenzeit*, "Acta Antiqua et Archaeologica," Vol. VIII, 1965, p. 111.

[96] Podborský, *op. cit.*, p. 151.

[97] See E. N. Černyh, *Drevnejša metallurgija Urala i Priuralja*, "Materialy i issledovanija po arheologii SSSR," Vol. 172, Moskva 1970, *passim*, especially p. 4 — map showing the centres of winning copper ore and localities that produced bronze, p. 106 ff. — their short characteristics, and p. 121 — the scheme of mutual connections between metallurgical centres of the Volga Basin and the Urals. Also Sulimirski, op. cit., pp. 346 ff., 358 ff. and p. 366 map 32.

[98] G. Mészáros, *Preszkíta lándsahiively kakasdról*, "Archaeologiai Értesitö," Vol. LXXXVIII, 1961, p. 217 fig. 7 — map.

[99] Kossack, *op. cit.*, p. 123 fig. 2 — map presenting particular types.

[100] Sulimirski, *op. cit.*, p. 397.