

Recent research on horse-harness of the Bronze and Early Iron Ages in Poland.

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In recent years more and more scholars have focused their attention on the problem of the provenance and distribution of horse-harness elements of the Bronze Age and Early Iron Age (Ha C-D) in Central and Western Europe in an attempt to compare them with similar objects from the vast areas of the Eurasian steppes. This research has provoked many different opinions and controversies. To support their ideas some authors have tried to present theories covering whole regions of thousands of square miles based on single or very rare objects, e.g. the theory of nomadic invasions or migrations from the East (Heine-Geldern 1951, is a good example).

In 1981 when the first comprehensive material from Central Europe was systematically published (H.G.Hüttel 1981) this lack of properly published material (but not theories) started to disappear, but it is still only a beginning and much remains to be done. This research is vital to explain the formation process of Early Iron Age culture in Europe.

To fill one of these gaps the present author has searched out horse-harness elements from most Polish collections and archives, presented the results of his research as a dissertation to the Jagiellonian University of Cracow, Poland (1986) and for publication (Kruszyński in press). The main aim of this article is to summarise this research with special attention focused on bits and cheek-pieces, to show their distribution relative to other horse-harness elements and their role in the interpretation of the class of horse-warriors and horse-users in the societies of the Polish Bronze Age and Early Iron Age.

The earliest objects of horse-harness had already appeared in Poland in the Eneolithic. A single antler cheek-piece of the Jordanów culture of the Lengyel-Polgar complex was found in the settlement in Jordanów in Central Silesia (Hüttel 1981, 18, 20, fig.2/h, footnotes 114-115). Two other antler cheek-pieces are known from the inhumation graves of the Corded Ware complex (in the oldest horizon A) from Koniusza in Little Poland (Kruk, 1973 61-69, fig.3/2) and Kietrz in Upper Silesia (Gedl 1972, 11-15, fig.1/1). Both burials represent graves of early horse-warriors. The assemblages contain not only horse-harness or miniatures of harness elements (as in Kietrz), but also weapons such as flint and stone axes and a bone dagger. It is interesting that the cheek-piece from Koniusza was made of a horse rib. The three cheek-pieces belong to the earliest known objects of this kind from Central Europe. Also during this time decorative elements of horse-harness started to appear, such as a bone tube from Koniusza.

Although Early and Middle Bronze Age cheek-pieces are quite well known from many hoards, graves and settlements in Central Europe, they are very rare in Poland (Hüttel 1981). Only recently have anthropologists from Cracow noticed four burned fragments among the cremation remains from three graves (Nos 597, 1383 and 2576) in Kietrz in the southern part of Upper Silesia, next to the Czechoslovak border (Gedl 1988, 83-90). Two of these fragments belong to the Magdeburg-Mikusovce type and the two others to the Spis type. All are dated to period III of the Bronze Age. Bones of an adult male,

who originally was buried in a wooden coffin, were found in grave 1383 suggesting his higher position among the rest of the people, whose remains were buried in pottery urns. It is difficult to suggest what role these early horse-warriors had, but their status was probably very high. It must be pointed out that all of these fragments of cheek-pieces were found quite accidentally during anthropological research, which may suggest that other pieces could have been overlooked at other sites by archaeologists.

The late Bronze Age and its transition with the Hallstatt C period saw a rapid development of horse-harness in Central Europe. Antler and other organic materials, although still in use were supplemented by bronze and later by iron. According to many scholars this change occurred as a result of a nomadic migration or invasion from the East European steppes into the Hungarian Plain and further west along the Danube (Gallus & Horvath 1939; Terenozkin 1976; Bukowski 1976). Despite their unclear origins (in the author's opinion rather more local development was involved) the elements of horse-harness appeared in increasing quantity in hoards and graves particularly in Hungary, Austria, Czechoslovakia and Romania (Gallus & Horvath 1939; Hüttel, 1981). These objects also started to appear on a bigger scale in Poland.

The HaB3/HaC objects occurred mostly in western and southern Poland (Silesia, Great Poland, Little Poland, Sieradz Region and Pomerania), the areas of the most developed groups of the Lusatian complex of the Urnfield culture, which during the Hallstatt C-D period were under very intensive Hallstatt influence. Some of these objects have quite strong eastern features, for example the bronze cheek-pieces of the Cernogorovka type from Karmin (hoard No 3) (Bukowski 1976, 23, 24, 83, 172, plate 8) or the cross-shaped leather strap divider from Wrocław-Wojszyce (Ebert 1927-1928, plate 87/x; Bukowski 1976 30, 43). These two types of objects are known from the vast areas between the Far East (China and Siberia) and the Atlantic coast of Portugal (Schule 1969, vol.1, 194, 195, vol.2, map 11). Together with cultural changes went changes in the form of objects. The late Bronze Age shapes gave way to new types, particularly new iron bits, which have not changed a good deal from that period to the present day. Although the HaB3/HaC objects, made mostly in bronze, are known from hoards, the HaC-HaD horse-harness elements occurred in graves. This gives much more information about the horse-warriors and their position in society. Graves provide assemblages which belonged to individuals. This differs from material in hoards which could have belonged to one person, a group of people or to a community as a whole.

In the late Bronze Age and the HaB3/HaC1 phase, bronze horse-harness elements were still relatively scarce in hoards and were associated with general material such as bronze axes, spear-heads, sickles, bracelets, necklaces, armrings etc. which occurred in larger quantities. This implies that they might have been related to several people. The HaC-HaD material from graves provides metal objects which can be recognized as equipment belonging to individual horse-warriors.

From the HaC-HaD/LT period 18 horse-warrior graves of the Lusatian complex are known in Poland. These provide data for establishing a list of equipment used by horse-warriors and horse-users. These graves are (Kruszynski 1986):

Silesian group:

1. Bystrzyca, voiv.Wroclaw- grave 1 (HaD).
2. Dobra, voiv.Wroclaw- grave 1 (HaD/L).
- 3-5. Gorszewice, voiv.Poznan- graves: 24 (HaC), 48(HaC), 5 (HaC/D).
6. Kilianów, voiv.Wroclaw- grave 2 (HaD).
7. Trzcínica Wołowska, voiv.Wroclaw- grave 44 (HaC).
8. Wroclaw-Ksiezé Wielkie, voiv.Wroclaw- grave 172 (HaC).

East Great-Polish group:

9. Charlupia Mala-Osmolin, voiv.Sieradz- grave 2 (HaC).
10. Lupice, voiv.Konin- grave 52 (HaD).
11. Piwonice, voiv.Kalisz- grave 4 (HaC/D).
12. Nadziejewo, voiv.Poznan- grave (HaC/D).
- 13-14. Skrajna, voiv.Kalisz- graves: 8 (HaD),10 (HaC).

Upper Silesian-Little Polish group:

15. Kalinow, voiv.Opole- grave 25 (HaD).
16. Kuniow, voiv.Opole- grave 9 (HaC/D).
17. Popielow, voiv.Opole- grave 1 (HaD).

Tarnobrzeg group: 18. Krzemienica, voiv.Rzeszow- grave 159 (HaD).

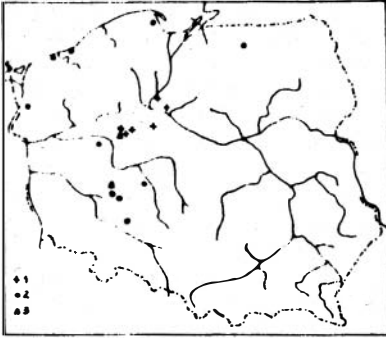
As can be seen from the above list the graves of mounted-warriors are concentrated mostly in Silesia and Great Poland. These assemblages occurred in the Hallstatt C period in Silesia, the western part of Great Poland and the Sieradz Region. They continued through HaD up to the beginning of the La Tène Period. The HaD assemblages are also known from Silesia and Great Poland, additionally occurring in eastern Poland in the lower San river basin around Tarnobrzeg.

The assemblages from graves provide the following list of objects (together with counts of their frequency) (Kruszynski 1986):

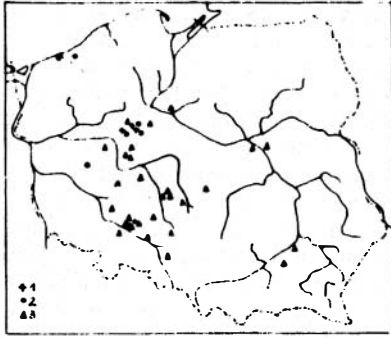
1. unpainted pottery	18	11. iron pins	4
2. painted pottery	3	12. iron necklaces	3
3. iron bits	16	13. bronze necklaces	3
4. bronze cheek-pieces	3	14. fibulae	2
5..iron knives	13	15. toilet gears	3
6. iron spear-heads	4	16. beads	4
7. iron axes	3	17. bronze rings	4
8. bronze axes	3	18. iron rings	2
9. belt elements	3	19. bronze buttons	3
10. bronze pins	4	20. bronze phalerae	1

Other single objects represent: iron and bronze chisels, omega-shaped and rectangular-shaped iron strap holders, an iron bracelet, an iron ankle-bracelet and a bronze razor. Two horse teeth were found only in one grave at Kilianów.

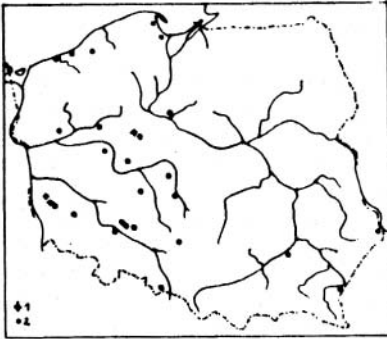
In order to throw more light on the interpretation of the horse-warrior class of the Hallstatt period in Poland three further graves must be mentioned. They did not contain horse-harness but, even more spectacularly, horse skulls. These graves were discovered at Gorszewice in the western part of Great Poland, the richest known cemetery for imported goods of Italo-Alpine origin and for metal horse-harness in the whole Lusatian complex (the cemetery belongs to the Silesian Group; Pieczynski 1954). There, in three cremation graves (No 16, 17 and 33), very rare objects were found which probably define these graves as



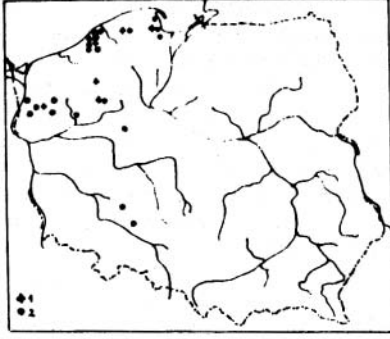
1.



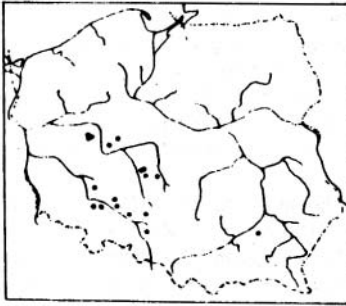
2.



3.



4.



5.

1. Distribution of cheek-pieces of the Hallstatt period (HaB3-HaD)
2. Distribution of bits of the Hallstatt period
3. Distribution of strap dividers of the Hallstatt period
1:antler 2:bronze 3:iron
4. Distribution of jingle-jangles of the Hallstatt period (HaB3-HaD) and decorated bronze plaques of the Late Bronze Age (HaB3). 1:plaques, 2:jingle-jangles
5. Distribution of the horse-warrior graves of the Hallstatt period mentioned in the text

burials of local chiefs. In two graves - alongside horse skulls - bronze swords were discovered, unique in Lusatian graves (in the burial-ground at Wrocław-Ksiezze Wielkie swords were also discovered, but made of iron - Luka, 1959,48, fig.26). Grave No 16 contained pottery (e.g. a zoomorphic vessel), a harp-shaped fibula, an iron necklace and amber beads. Grave No 17 produced an iron lugged axe, bronze tweezers, a bronze sword with a bar handle, a bronze chape, a fragment of an amber ring, a bronze pin and pottery. From the grave No 33, a sword with a bar handle, an iron battle-axe with a gold plated head, a bronze pin, an iron knife, a dark glass bead, bronze wires and pottery were recovered. In spite of the absence of horse-harness, all three burials can be interpreted as graves of horse-warriors of a significant social position, probably from the top of a local hierarchy, including chiefs. On the basis of these three graves it is possible to say that the governing individuals of a local society were equipped with swords and iron battle-axes with golden decoration as symbols of power. A very rare tradition for the late Lusatian complex can also be observed, that of depositing horse bones, particularly skulls, in graves which also have a symbolic meaning and which could be the remains of a horse sacrifice.

The 18 Lusatian graves containing horse-harness show that the Lusatian horse-warriors were equipped with weapons such as spears with iron heads, iron and bronze axes and iron knives. These are similar to the specimens which can be observed in the representations of warriors on *situlae* and belt plaques of the SE Alpine Hallstatt culture.

Horse-warriors probably played an important role in the Early Iron Age societies of Poland. They were not very numerous (generally speaking their graves are quite rare) but they belonged to the social elite. Horses with complete equipment had not only a real value, but represented a symbol of prestige. J.Kostrzewski (1955, 150) states that "numerous iron bits in graves of that period (HaD), the appearance of horse-harness elements in hoards and on settlements and the representations of horse-riders on pottery indicate the growing role of the horse in warfare and everyday life". He also states that "swords were used only by tribal chiefs fighting on horse back and because of that harness and horse skulls were sometimes buried with dead riders (Kostrzewski & Chmielewski & Jazdzewski 1965, 190). According to W. Hensel (1973, 257) the class of horse-warriors was divided into two parts; higher, with users of iron bits and lower ('spearmen') who had horses with bits made of antler.

Representations of horses, horse-riders and 2- and 4-wheeled carts (as well as clay figurines e.g. from Topornica, voiv. Zamosc in eastern Poland-Gardawski 1979 310, 311, fig.187/3) are known on pottery of the Lusatian and Pomeranian cultures. This pottery shows schematically some scenes which throw light on the role of the horse in HaD and the beginning of the La Tène (non-Celtic) period in Poland.

Vessels with representations of horse-riders are known from the following sites (Gediga, 1970, 113-115, 136-138; Gedl 1971, 203; Hensel 1973, 184; Lachowiczowa 1965, 93, 107; Luka 1971, 22):

- | | |
|--------------------------------|---|
| 1. Biskupin, voiv.Bydgoszcz. | 7. Siekówko, voiv.Leszno. |
| 2. Klimontów, voiv.Tarnobrzeg. | 8. Sobiejuchy, voiv.Bydgoszcz (gr. 45). |
| 3. Łazy, voiv.Wrocław. | 9. Stawnica, voiv.Poznan (grave 1, 2). |
| 4. Olszanowo, voiv.Słupsk. | 10. Witkowo, voiv.Bydgoszcz. |

5. Ostreozki, voiv.Gdansk.
6. Parsecko, voiv.Koszalin.

11. Wlostowo, voiv.Poznan.

Representations of horses alone are known from the following sites (Gediga 1970, 133):

- | | |
|-------------------------------|--------------------------------|
| 1. Biechów, f.distr.Glogow. | 5. Osetno, f.distr.Góra. |
| 2. Biernatki, f.distr.Srem. | 6. Staw, f.distr.Szczecin. |
| 3. Kuczewo, f.distr.Koscian. | 7. Wegorza, f.distr.Nowogard. |
| 4. Ksiezno, f.distr.Wrzesnia. | 8. Zaborowo, f.distr.Wolsztyn. |

According to the images on vessels, horses were used not only for fighting and farming but also for hunting (e.g.the representations of deer hunting on the urn from Olszanowo) and maybe for religious rituals (W.Hensel 1973, 184).

As can be seen from the above list, the representations of riders and horses occurred again mostly in western and northern Poland (Silesia, Great Poland, Western and Gdansk Pomerania), and only from one site in eastern Poland (in the lower San river basin). The following is a summary of the general distribution of the different elements of horse-harness, together with their chronology (Kruszynski 1986).

1. Cheek-pieces:

-antler/bone: Great Poland, Kuiavia, Chelmno Region (HaD-LTA);
-metal: Silesia, Great Poland, Western and Gdansk Pomerania, Masuria, Sieradz Region (BrV-HaD)

2. Bits:

-antler/bone: Great Poland (HaC-HaD);
-metal: Silesia, Great Poland, Kuiavia, Chelmno Region, Sieradz Region, Mazovia, Little Poland (HaC-LTA);

3. Strap dividers:

-antler/bone: Great Poland, Lubsko Region (HaD);
-metal: Silesia, Great Poland, Sieradz Region, Chelmno Region, Western Pomerania, Lubsko Region, Little Poland (HaB3-HaD);

4. Jingle-jangles:-bronze: Western and Gdansk Pomerania (BrV-HaC), Great Poland (Ha), Central Silesia (HaD);

5. Decorated bronze plaques: Western Pomerania (BrV).

At the beginning of HaC the situation among horse-harness elements remained similar to that at the end of the Bronze Age. Many objects characteristic of the so-called "Thraco-Cimmerian horizon" were still in use in Central Europe. This situation changed during the HaC period and new types of objects were introduced. The earliest stage of HaC (HaC 1) is characterised particularly by objects from the Pomeranian hoards such as Kielpino, Kazimierz Pomorski, Pyrzyce and Steszyce, which represent bronze types of horse-harness (Wolagiewicz 1957; Lachowicz 1978). In Silesia the late Bronze Age forms of metal objects and pottery are also seen among the HaC material; it is often impossible to distinguish between both groups when assemblages do not contain iron objects or painted pottery. Somewhere in the middle of HaC iron bits without cheek-pieces occurred commonly. These continued throughout the HaD and early La Tène (non-Celtic) periods. Cheek-pieces, common among the harness elements in previous periods, were replaced by different rings which were used to connect bits with the rest of harness. The new form of bits was so

simple that it has survived until now. The Hallstattian objects in Poland were hammered from iron bars and curved at the ends, forming loops. These bits occurred mostly in western Poland and in the few other places mentioned above. According to J. Piaskowski these objects were made of low phosphorus iron of the St. Cross Mountains type (typ swietokrzyski), but it is still difficult to say if this iron was imported or of local origin (Piaskowski 1971, 37-49). Such iron could have been imported from outside the Lusatian complex and hammered locally later. The dense concentration of bits in Silesia and Great Poland suggests that it could have happened in these areas, which belonged to the most developed in the Lusatian complex. The earliest objects of that type occurred in Silesia and later spread into Great Poland and other regions of Poland. In the Silesian-Great Polish region, bits with twisted links (type 2) also appeared, probably imports from the West-Hallstatt culture.

In the defended settlements of the Biskupin type in Great Poland and the Chelmno Region, bits and strap dividers made of antler and bone were still in use (Rajewski 1950, 174). They represent mostly simple objects made in local workshops. The organic bits are shorter (8-10 cm) suggesting that they were used for smaller horses of the Polish pony type (iron bits were used for riding horses; ponies were used for farming purposes). This is confirmed by the bones found on settlements (III Sprawozdanie Biskupinskie 1950).

At the end of HaC and the beginning of HaD objects of Scythian types occur such as the antler cheek-piece from Mlyniec, voiv. Torun (Sulimirski 1939, 81, fig.2; Bukowski 1977, 94), the iron bit of Szentcs-Vekerzug type from Wymyslowo, voiv. Leszno (Luka 1948, 109, 110, fig.11), the strap dividers with zoomorphic decoration from Brozek, voiv. Zielona Góra (Bukowski 1977, 36-40, 342, plate I/5a,b) and Przewodowo, voiv. Zamosc (Bukowski 1977, 104, 105, 358, plate 16/6-Przewód) and maybe the two iron bits found in Krzemienica, voiv. Rzeszów (Bukowski 1977, 196, 197, fig.10) and Sokolniki, voiv. Tarnobrzeg (Bukowski 1977, 109, 197; Moskwa 1976, 114, fig.5/4) (both bits belong to the repertoire of the Tarnobrzeg group which has produced a dense concentration of Scythian-like objects e.g. arrow-heads and bronze nail-shaped earrings). These are relics of the Scythian infiltration into the Lusatian complex (Bukowski 1977). Bukowski suggests that the iron bit and the bronze buttons from the defended settlement in Kamieniec, voiv. Torun (Bukowski 1977, 195, 196) can also be connected with the Scythian invasion(s) of the 6/5 cent. BC, which passed through Silesia, Polish Jura, Kuiavia and the Chelmno Region (Bukowski 1978, 401-408). In the author's opinion the bit and buttons from Kamieniec are of local origin and they match the rest of the Lusatian objects of these types. In HaD the connections with the West-Hallstatt culture and Italo-Alpine region played an important role resulting in the appearance of high quality objects such as the pair of horse-harness from Woskowice Male (hoard No 3), voiv. Opole (Luka 1959, 15, 16, fig.9). These objects were brought to the Lusatian complex via the Bylany and Horakov cultures of Bohemia and Moravia.

As can be seen from the material presented above the problems connected with horse-harness are very important for many areas during the Bronze Age and the Early Iron Age. The archaeology of Central Europe and its interpretation can be particularly vital for revealing the relations between Central- Western Europe and the vast steppe areas in the East in Eurasia, as well

as for uncovering the role of the horse and its importance as a means of transport in societies of the transitional period between the Bronze and Iron Ages. This may lead to an explanation of the problem of involvement of the Carpathian Basin in exchange of goods and in military activities in the region. The changes in the Lusatian complex in the HaC period and the appearance of the defended settlements were evidently caused by the changes in the military balance in Central Europe. Although the existence of the Scythian involvement seems to be clear, the method of its deliverance and by whom needs more research. The appearance of the Scythian-like objects in the Tarnobrzeg group for example, does not confirm the direct involvement of the Scythians from the steppes or from the Hungarian Plain. Do the people who penetrated the Lusatian complex represent the Scythians or rather someone else equipped with Scythian-like weapons ?

It is even more difficult to interpret the situation during the HaB3 period and involvement of peoples such as the Cimmerians. It is still very unclear whether the changes in HaB3 were caused by the waves of invasions and migrations or simply made by the appearance of the new metal- iron and creation of the new trade routes.

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