

## ANIMAL IN THE LIFE OF THE NORTH-CARPATHIAN AENEOLITHIC AND EARLY BRONZE AGE POPULATIONS

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Progression of pastoral economy of the Young Aeneolithic societies of the Northwestern Inner Carpathians grew also on the background of external influences. It eventually resulted in a high value of a herd which was probably formally expressed in the increased number of zoomorphic sculptures. It is the part of the database of finds of small zoomorphic statues from this period and territory which suggests similarity with Transcarpathian Eurasian finds. Together with the presence of individuals or groups of eastern origin, the increase in the number of new longwool sheep species originally bred in the Near East and transported to the territory of the Inner Carpathians at the end of the old prehistory can be considered a consequence of eastern impulses in relation to the higher frequency of small animal sculptures. The value of the domesticated animal intensified the process of social stratification, prioritized the owner of the herd and the service unit and was deeply reflected in the abstract world of Baden autochtones.

### MINUTE ZOOMORPHIC FIGURINES

Small zoomorphic statuettes are remarkable finds of the late Baden culture phases and ensuing Early Bronze Age cultures in the Inner North-Western Carpathians. Their special position in the life of Baden populations is documented by a high index of finds that links this territory with those at the forefront in Central Europe (more than seventy artefacts, i.e. the most of them within the whole Baden culture territory, is known just from a fortified hilltop settlement at the Veľká Lomnica-Burchbrich position; *Novotná/Soják 2013, 129*).

Less frequent figurines, similar in form and time, are also known from the Outer Western Carpathians (*Pavelčík 1982; 1992; Ruttkay 2001*) and from the milieu of Schneckenberg, Coțofeni and Tripolye cultures (*Horváthová 2010, 79*). Along with female idols, anthropomorphic and gynecomorphic ceramics and various clay imageries of contemporary objects, zoomorphic figurines represent now a characteristic collection of settlement finds, the genesis and distinctive appearance of which in the young- and late Baden world has become a subject of increasing research interest (Fig. 1).

Chronology only of several artefacts from a database of recently known minute zoomorphic finds from the Inner North-Western Carpathian territory dated to the Aeneolithic and the Early Bronze Age can be elaborated in details. Settlement finds from the site at Stránska are dated to the Late Baden period and can be synchronised with the post-Baden cultures through associated pottery, mostly acuminate mugs (*Horváthová/Nevizánsky 2017; Nevizánsky 2009, 23 f*). However, no minute zoomorphic figurines were found at the Bošáca culture site in Hajná Nová Ves (*Wiedermann 2013, 15–36*) or at other contemporary post-Baden sites. The situation differs with younger finds. These are dated to the Early Bronze Age and come from the Maďarovce and North Pannonia culture circle (*Bátora 2017; Bátora/Vladár 2015, 126, fig. 103*).

Similar situation has been observed also with finds of the older Baden culture periods in the Inner North-Western Carpathians. The Boleráz phase is represented by relatively rustic forms of minute zoomorphic figurines. The same cultural milieu gave origin also to the well-known cart application from Radošina (*Němejcová-Pavůvková/Bárta 1977*). Occurrence of the zoomorphic statuette together with miniature objects (clay hammer-axe a. o.) and mainly a group of zoomorphic figurines from late-Baden hilltop sites are unusual. The statuette was obviously more precisely made and its artistic processing is comparable to a similar figurine dated to the Early Bronze Age (*Nevizánsky 2009, 24*).

Modelling of clay statuettes of animals undoubtedly exceeded local tradition and from the Neolithic it evidently became an over-regional phenomenon with broad transterritorial reach from the Near

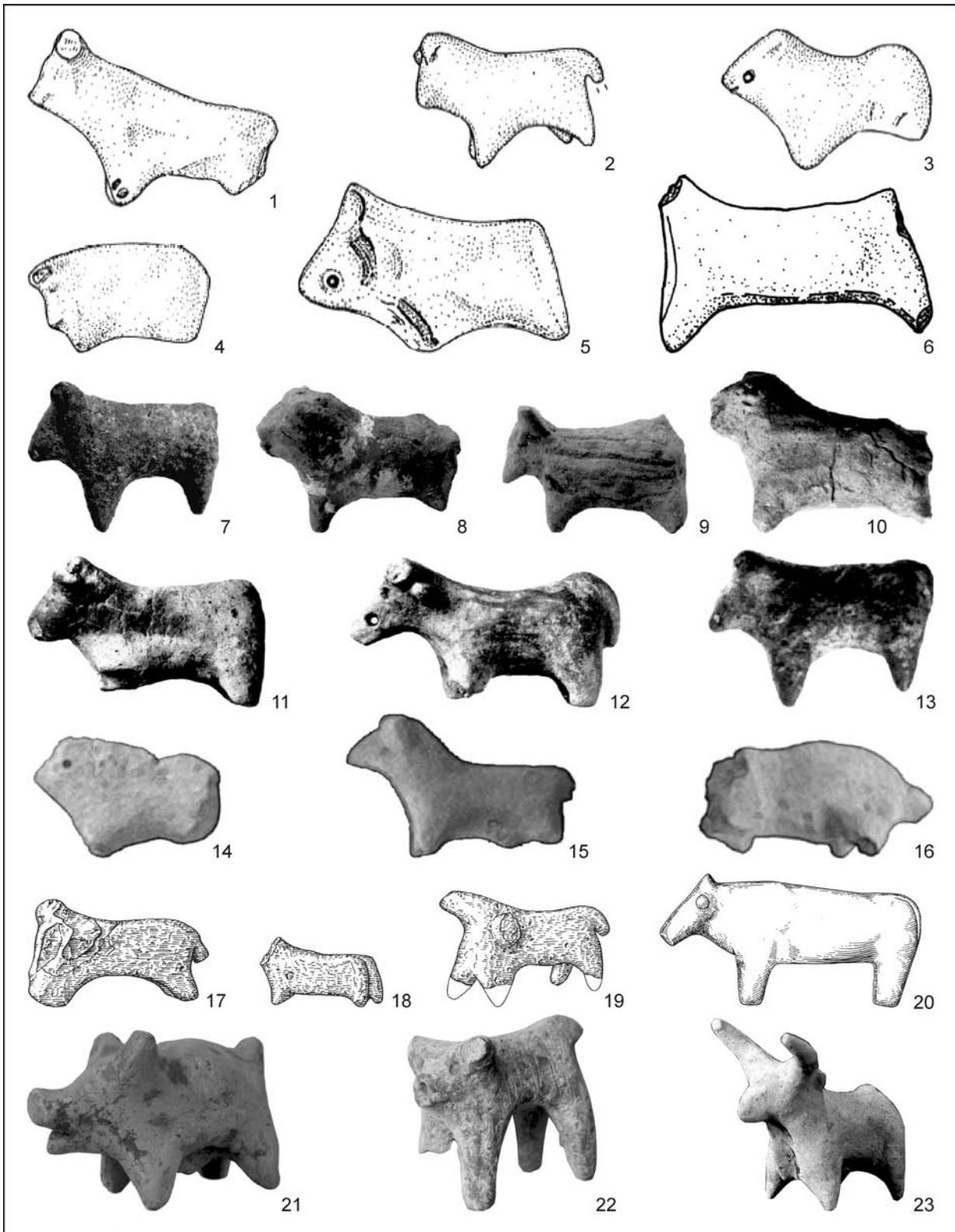


Fig. 1. Inner North-Western Carpathians, Trans-Carpathians and Caucasus. Selection of finds of minute zoomorphic figurines dated to the Aeneolithic and the Early Bronze Age. 1–5 – Stránska (Nevizánsky 2009, tab. 1: 1–5); 6 – Bratislava (Farkaš 2009, fig. 2); 7–13 – Veľká Lomnica (Novotná/Soják 2013, fig. 100: 12–16; 103: 9, 11, 12); 14–16 – Lieskovec-Hrádok (Malček 2010, tab. 1: 1, 2; 2: 1); 17, 19 – Caucasus/Kura-Arax culture (Bybakov 1994, tab 14: 10, 16, 24); 20 – Caucasus/Maykop culture (Bybakov 1994, tab. 49: 7); 21 – Ukraine (<http://www.encyclopediaofukraine.com/>); 22 – Rybník (Bátora 2015, 126); 23 – Bilcze Złote/Tripolye culture. <https://sk.pinterest.com/pin/321163017167896381/> [22. 1. 2018]

East to north Europe (Becker 2007). Researchers dealing with this issue have reflected and analysed the functionalistic background of zoomorphic figurines in local communities in the main. Their prior interest has been focused on traditional explication of the statuettes as an instrument of cult character. In this sense, the clay zoomorphic artefacts could represent a mythic totemic animal that personified ancestors or a form of tangible symbol (substitute) that was used in rituals, in which also live animals could be sacrificed.

### **Cult, social-economic and environmental accents of zoomorphic figurines**

In the context of increasing index of zoomorphic finds dated to final aeneolithic periods in the Inner North-Western Carpathians, the database of professional literature dealing with this issue has naturally proliferated (Bátora 2017; Bátora/Vladár 2015; Farkaš 2009; Horváthová 2010, 79; Malček 2010; Nevizánsky 2009; Novotná/Soják 2013; Vladár 2009a; 2009b). The studies were analysing various aspects of markedly accelerated trend of zoomorphic modelling (of domestic animals and game). The statuettes can undoubtedly be perceived as artefacts of a phenomenal nature, which, of course, require proper research. As we have already pointed out, most of the reflections are mainly in the cult-religious context. Their intentional damaging is highlighted in particular. The marked increase is also explained by the current food trend – consumption of meat in local populations on the background of a “cult-ceremonial” practices; or later also as subjects representing a substitutional function.

Along with the exceptional and long-known sites related to the cult life in the Early Bronze Age (first of all Spišský Štvrtok, Nižná Myšľa, Nitriansky Hrádok, Rybník, Santovka; Bátora 2017; Bátora/Vladár 2015), the fortified hilltop settlement at Veľká Lomnica-Burchbrich (Novotná/Soják 2013, 141) is an excellent example of a microregion with rare finds of zoomorphic figurines dated to the Baden culture in the Inner North-Western Carpathians. Tens of mostly broken clay statuettes probably represent the species composition of the palaeofauna that was kept by or lived in direct contact with the late Baden people (sheep, ram, goat, cow, ox, pig, dog, horse, wildcat, bear, lynx). It cannot be excluded, however, that the zoomorphic sculpture was simultaneously a manifestation of the growing preference of the pastoral economy but, above all, that it could be a witness to a certain stage of the cult of domestic animals in the North Carpathian populations, maybe comparable to the situation on another (younger) significant site – a fortified settlement at Rybník (Bátora/Vladár 2015, 125)<sup>1</sup>. In spite of the increased occurrence of zoomorphic figurines, the basic difference between the two fortified settlements is their cultural and chronological status and, above all, the character of the socio-structure practising the sacrifice. The in-situ situation indicates that at Burchbrich it was the most probably a whole-community sacrificial ritual at a special cult site (Soják/Novotná 2013, 141), while at Rybník it was rather its more advanced concentrate in an intimate atmosphere of family circle. One or more (6–8) zoomorphic intentionally damaged figurines (mainly cattle and pigs) that were found in house interiors at Rybník are evidence of an exceptionally developed cult tradition. We presume a local shaman was the ritual bearer and executor at the same time and he carried out the very act of substitutional sacrifice directly in the house to multiply the herd or ensure successful hunting (Bátora 2013, 211; Bátora/Vladár 2015; Vladár 2014, 240).

The prehistoric fortified hilltop settlements at Burchbrich and Rybník are exceptional not only due to the wide range of species and number of the zoomorphic figurines found (mainly at Burchbrich), but explicitly also in their relative complexity and information value of the sources in terms of archaeological and interdisciplinary research. All local factors, such as unusual geographic high altitude under the highest peak at the foot of the High Tatras (Burchbrich), or an important strategic cultural and commercial centre (Rybník), the exposed residential form – fortified hilltop settlement (with cult or commercial and strategic function?), or specific finds can document the unique historical status and over-regional importance of the two sites at the turn of the Aeneolithic and the Early Bronze Age. At the same time, constituent components of the finding places can offer a remarkable set of information for palaeoenvironmental, palaeoeconomic and cultural-historical research.

<sup>1</sup> At least one animal statuette was found in the interior of each house at Rybník, in one case also in a special bowl-shaped feature containing animal bones, pottery fragments and an intentionally broken clay animal figurine. Regarding the fragments framing into one another, the statuettes were very probably damaged directly in houses.

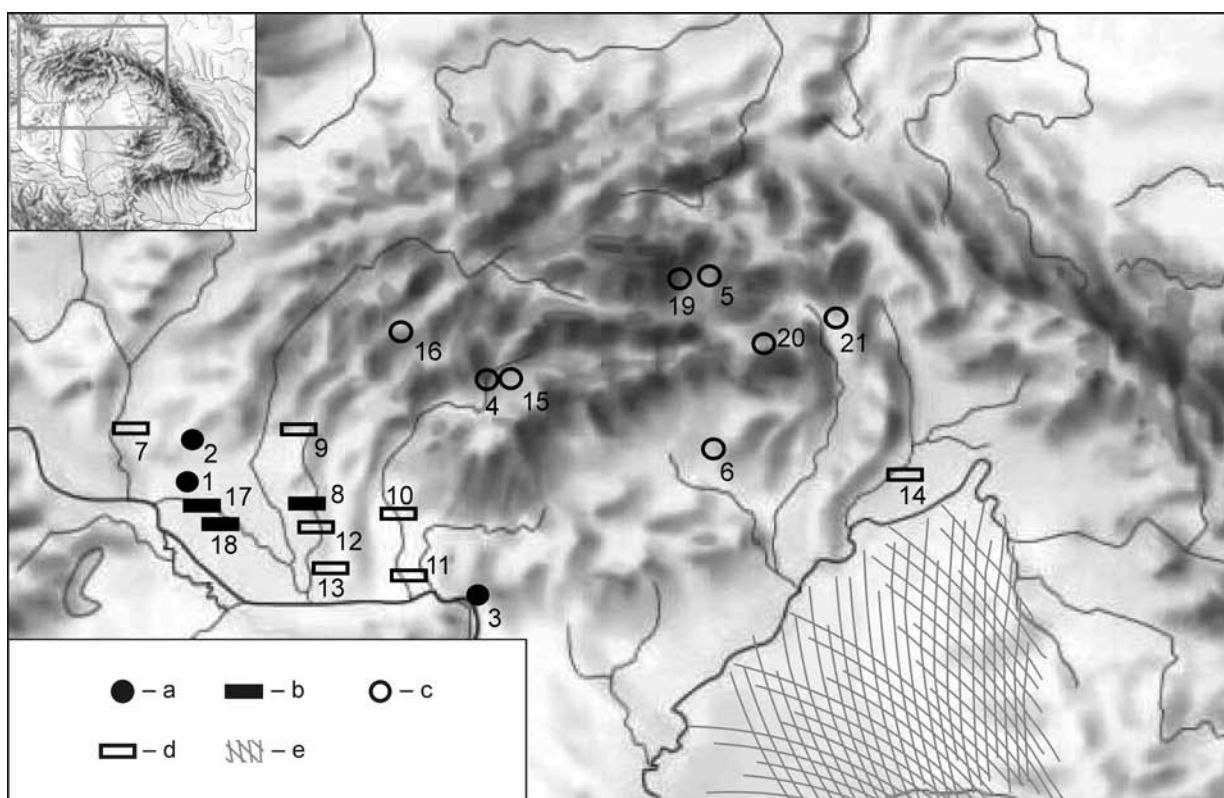


Fig. 2. Map of Inner North-Western Carpathians. Finds of the zoomorphic figurines and animal burials of the Boleráz group and at sites of the Aeneolithic. 1 – Ivanka pri Dunaji; 2 – Budmerice; 3 – Vác; 4 – Lieskovec; 5 – Veľká Lomnica; 6 – Stránska; 7 – Kopčany; 8 – Komjatice; 9 – Jelšovce; 10 – Šarovce; 11 – Bíňa; 12 – Bajč-Vlkanovo; 13 – Svodín; 14 – Bracovce; 15 – Zvolen; 16 – Bojnice; 17 – Pezinok; 18 – Slovenský Grob; 19 – Vysoké Tatry; 20 – Smižany; 21 – Žehra (after Farkaš 2009; Malček 2010; Nevizánsky 1999; Novotná/Soják 2013). Legend: a – zoo plastic from Boleráz group; b – zoo deponium from Boleráz group; c – zoo plastic from Baden culture (III–IV); d – zoo plastic from Baden culture (III–IV); e – the nord-Tisa oicumene of the Pit Grave culture.

The tendencies of preferring domestic animals appeared in the funeral rite of local communities in the classical phase of the Baden culture already. Pig, dog, calf and cattle were buried in graves together with the deceased or separately. Similar graves dated to the same historical period were documented also in wider than Carpathian regions and were interpreted as manifestation of the cult that was known also in oriental environment (*Němejcová-Pavúková/Šiška 1970, 194 f*). More recent research has provided additional information on ritually buried animal skeletons or their parts in settlement pits or in graves of the Baden culture (*Horváth 2004, 70; 2006, 101; Struhár 2001*).

The present finding situation is rather a testimony to the fact that the traditionally practised cult of burying of animals (maybe even endangering a community existence in critical periods) in the classical phase of the Baden culture retreated in favour of zoomorphic sculpture during the late Baden culture period (Fig. 2). The factors causing the decline of this conservative and long-lasting collective tradition can be primarily sought maybe on the level of vital determinants of minimal survival rate. This would mean that the decrease of animals in graves, or vice versa, the apparently increased frequency of their substitutes in the form of zoomorphic figurines in the milieu of the late Baden culture in the Inner North-Western Carpathians could very probably coincide fundamental changes in the cult practices along with an economic conversion of the late Aeneolithic autochthons. A key position in the late Baden economy was gained by pasturage. This fundamental economic change based on the boom in cattle breeding the very probably brought also the change in religion. The ancient (later biblical?) tradition in the form of the bloody sacrifice cult evolved into a new abstract form (zoomorphic sculpture), which in practice resulted in focusing on cultivation (rigorous breeding) of existentially strategic animal species.

Based on this, we may presume that a profane environment with its growing preference for the economy of breeding and maybe hunting (*Vladár 2009b, 204–213*) seriously affected the spiritual world

of socio-groups. This could result in transformation of sacrificial practices of the late Baden people living in the Inner North-Western Carpathians from the real to the abstract form. The reduction of the bloody sacrifice to the fictitious act of damaging a substitutional clay figurine can be perhaps judged also as a result of a certain economic pragmatism. Thinking in contemporary socio-economic relations, however, also means a slight shift in the focus of the research from the religious sphere to that of economy or into the space of their mutual interaction. The rearrangement of the research position can simultaneously open up new themes that are related rather to the prosaic economic life of the populations under study.

A possible mutual correlation of production of minute zoomorphic artefacts with arising pastoral palaeoeconomy in the end of the Aeneolithic can be one of the emerging topics. In the spiritual sphere, this transformation would be projected into demise of the traditionally practiced collective sacrifice cult (Burchbrich) and the commencement of the individual symbolic ritual carried out by a competent person (Rybník – a shaman's house; *Bátora/Vladár 2015*, 125). Simultaneously, in the profane sphere, there can emerge topics related to, for example, the species representation in a herd, or a share of domesticated animals in the field of transport, or even topics concerning changes in the late Baden social structure.<sup>2</sup> Accumulation of ownership under until now unidentifiable conditions is already evident in some burial grounds of the Polgár culture in the Tisa river basin (*Nevizánsky 1990*, 72). Finally and above all, another important issue is the ground of the genesis of this new situation and the search for causes that led to such a significant epochal socio-economic transformation.

The need to extend our view on the issue is also supported by other observations. Apparently, a new territorial trend in the late Aeneolithic was a local shift of the Baden oicumene into sub-mountainous or mountainous regions of the Inner North-Western Carpathians. In the higher situated and usually until then unsettled mountain areas, in which also caves were occupied by the late Baden people (*Horváthová 2010*, 30 f; *Soják 2007*; *Wiedermann 1995*; *1996*), another important phenomenon is observed – absence of graves of domesticated individuals (*Struhár 2001*, fig. 2), which occurred earlier in the Baden culture settlement objects situated in the lowlands (*Horváth 2006*, 101).

The changes described above (the change of zonation and the change of tradition) very probably correlate with each other and can be evaluated as a fundamental turning point in the life of the late Baden and post Baden people living in the Inner North-Western Carpathian foothills. It is quite a difficult task to name the possible factors that led to these changes and to reconstruct the course of the process. We can consider maybe three mobilization factors.

- Environmental change (*Wiedermann 1995*; *1996*; *2001*; *2003a*; *2003b*)
- Socio-economic and cultural-historical change (*Vladár/Wiedermann 2017*)
- Raw material sources (*Vladár/Wiedermann 2017*)

Based on climate modelling, climate fluctuations can be registered in some sub-mountain areas of the Inner North-Western Carpathians much earlier than at the end of the Aeneolithic. Climate changes were the most probably connected also with the process of discontinuity of the late Linear-Želiezovce settlement and with evidently changed enviroparameters of the early Lengyel settlement. They can indicate approaching continental climate with other possible short-term fluctuations (the Neolithic and Aeneolithic transition). During the dry periods the settlement centre moved to the higher zones and the lower chernozem areas could get more distinctive steppe character that limited farming activities.<sup>3</sup>

<sup>2</sup> Internal changes in the late Baden society were reflected mainly in the social stratification (*Vladár 2009a*, 157). The herd size and maybe also species in them (cattle, sheep, goats, pigs) became an indicator of capabilities of individuals or communities, a prestigious stock symbolizing property and power. Metaphorically said, domesticated animal entered deeply into the livestock breeders' material (everyday) world and even into their spiritual world, becoming a determinant of success and legalizing the owner's local or regional status. In the case of crisis, the herd became a relevant factor for community survival. In the community system, the clay figurine of animal could be a tangible expression of pastoral etalon or universe, i.e. the permanent personification of the image of the community spiritual and profane world.

<sup>3</sup> It should be very generally noted here that the natural environment is a dynamic factor that forms the constant context of human activities. Intensification of agriculture in the late Aeneolithic, using fire as the most effective means of destruction of forest vegetation, brought in the Aeneolithic a substantial extension of open areas, what was the way of creating appropriate conditions for a new system of pasture-fallow economy. The new system of farming consequently changed the character of breeding animals. In addition to the settled Baden communities of farmers, an independent pastoral economy in the form of moving semi-nomadic and nomadic forms of cattle breeding could be gradually formed on the background of "devastating" agro-technology and climate changes.

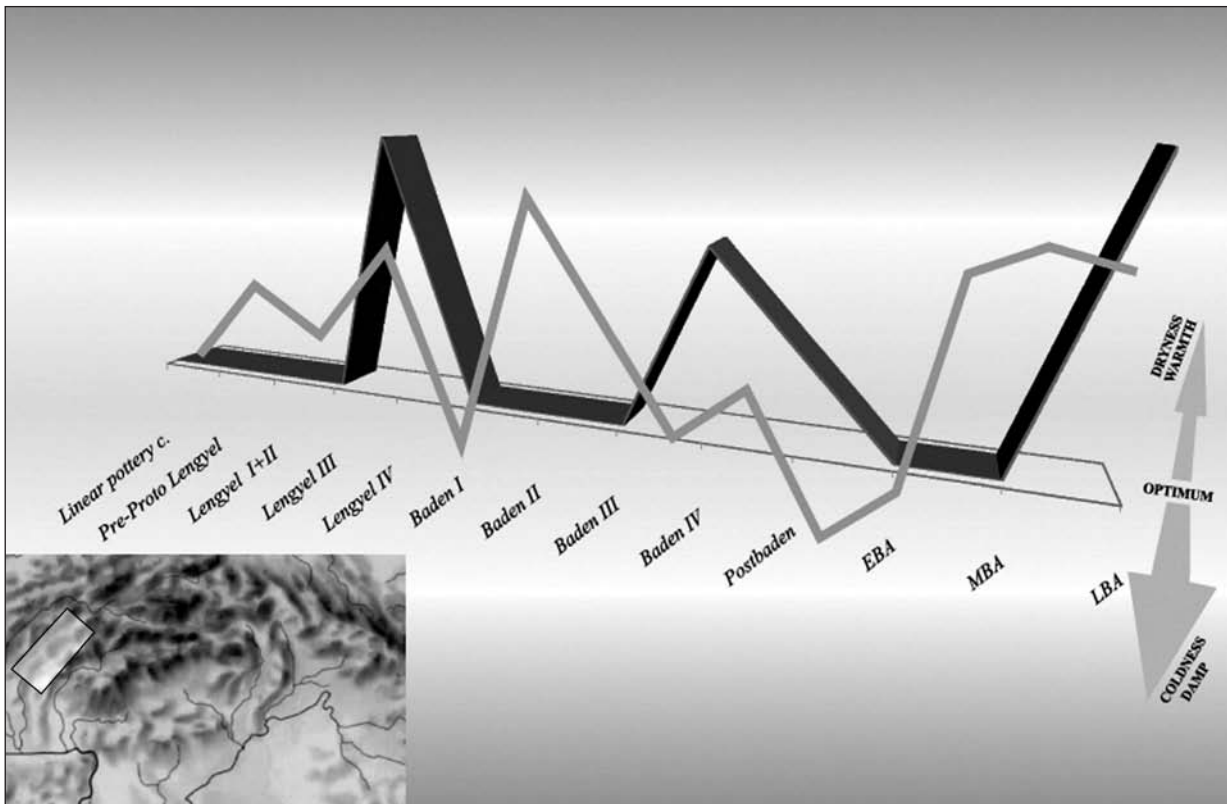


Fig. 3. Inner North-Western Carpathians. Central and upper Nitra river basin. Graph of frequency of use of cave spaces in correlation with climate changes from the Neolithic to the Hallstatt period at sites Bojnice-Prepoštská jaskyňa cave (Bárta 1980), Radošina-Čertova pec cave (Bárta 1959; 1980), Slatinka nad Bebravou-Dúpna diera cave (Bárta 1983), Omastiná-Vlčia diera cave (Bárta 1985) and Čierna Lehota-Dubná jaskyňa cave (Wiedermann 1985, 51).

Results of analysis of the relation between the settlement and natural conditions in the central Nitra meso-region situated in the western part of the Inner North-Western Carpathians show that in the intervals of precipitation deficits the lowland areas lost their importance for direct settlement that moved to peripheral locations with chernozem-brown soil or flood plain-brown soil, but especially to wet hilly areas with brown soil, or even deeper situated mountain areas (settlement of caves) that were suitable mainly for the pastoral economy (Fig. 3). The flood plain then lost its priority economic function and, with the exception of the Middle Aeneolithic, when there was a concentrated part of the Baden settlement complexes in close contact with the watercourse, was not such a preferred economic base. The floodplain landscape with residues of marsh, meanders, and dead arms with stagnant water most likely did not offer the ideal living space during the dry periods of the late Aeneolithic (Wiedermann 2003a, 82 f).

We cannot exclude that the changing environmental and from it following economic situation together with the extraordinary cultural and historical milieu in a broad geographical context of the late Baden communities living in the North-Western Carpathian foothills is obviously reflected in the lack of animal depots in mountain areas. As if the late Baden and post Baden communities responded to the new situation by the trend of maximal preservation of the herd integrity. Also remarkable is the landscape space in which these communities found an alternative environment. They were relatively remote mountainous parts of the country that were well known to the autochthons.

Somewhere in the background of in the mean time unusual settlement tendency, a new environmental situation hence could emerge that caused the profound changes in the economic and social structure of the populations living at the turn of late Aeneolithic and early Bronze Age. Application of these new trends can be explained both economically – by the necessity of vertical transhumance for keeping and breeding the herd – as well as from the cultural and historical point of view as a consequence (sophisticated herd protection against potential enemy) of a new population-demographic or ethnic situation in the Carpathians and the Lower Danube basin (Horváthová 2010, fig. 29; Vladár 2009c, 222; Vladár/Wiedermann 2017). The inner-Carpathian Baden populations seem to respond adequately to the complex of

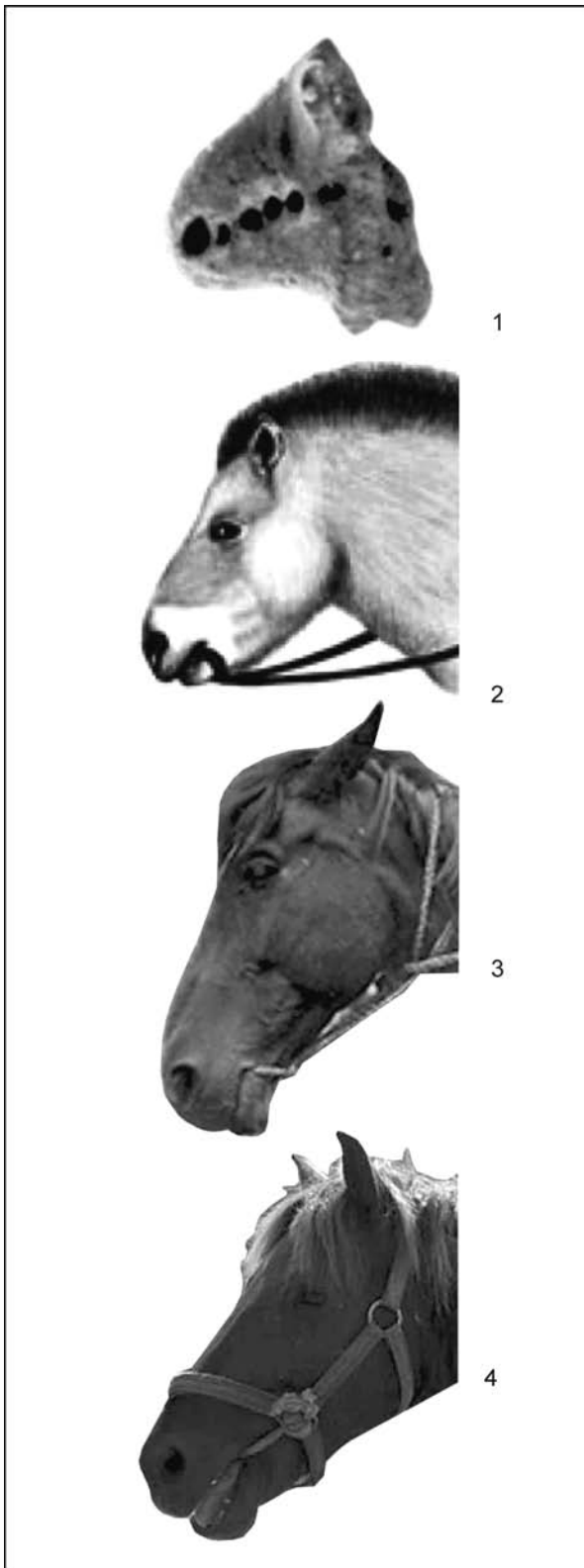


Fig. 4. 1 – Veľká Lomnica-Burchbrich. Probably the head of a horse figurine with implied bridle (Novotná/Soják 2013, fig. 100: 4); 2 – reconstruction of a prehistoric bridle (<https://www.sciencedaily.com/releases/2009/03/090305141627.htm>); 3, 4 – examples of recent bridling (without and with the bridle bit).

mutually related changes by questing to find new comparable breeding conditions.

The environmental and economic aspect, however, is not the only one that can be identified in the structure of changes concerning the late Baden north-Carpathian settlement. Another significant process of settlement strategy occurred in the sub-mountainous regions as well. In parallel with the economic changes, new important settlement forms – fortified hilltop settlements – appeared. Universality of this type of fortification unit consisted in the function of a centre used for seasonal concentration of the herd or in the function of a significant cult site (centre), but also in the function of safe refuge in times of turbulent migration movements.<sup>4</sup>

Evidence of the possible entry of new communities with steppe bases, represented by finds of ware decorated with corded ornament and by other attributes, or identifiers to the vicinity of the north-Carpathian Baden oicumene (the fortified settlements in particular) were already indicated elsewhere (Vladár/Wiedermann 2017). Nevertheless, the framework of interactions of autochthons with allochthons remains uncertain. It could be at least partially clarified by more-less rare archaeological sources or by comparison with almost contiguous migratory processes observed in the North Caucasus.<sup>5</sup> Regarding the artefacts, along with corded ware there are finds of stone axe-hammer imitations (the so-called battle hammers) with rounded butt, or a unique find of a horse's head sculpture with the adumbrated bridle bit<sup>6</sup> (Fig. 4) suggesting a possible existence of horsemen (Novotná/Soják 2013, fig. 100: 4).

<sup>4</sup> Particularly large influx of eastern communities of the Yamna culture to the river Tisa region is presumed mainly during the early period of the Cernavoda III culture (Ecsedy 1979, 47–62).

<sup>5</sup> Formation of ethnic groups of the Kura-Arax culture outside its oicumene was motivated by migration of the population into areas offering new opportunities (viticulture, metallurgy, and wool processing). After the third millennium, groups of population had moved south, south-west and north from their common cultural and geographic identity of the Kura-Arax culture that was situated in a mountainous environment predominantly, to the regions of other cultures, where they became active ethnic groups within heterogeneous communities. This meant a significant change in the life of agro-pastoral communities with locally oriented craftsmanship, to a mobile, rather soldierly-like, lifestyle. This was the way how new identifiable ethnic groups arose within the local populations, which gradually were integrated and then finally assimilated into local culture via continuous sharing of values (Rothman 2015).

<sup>6</sup> An antler cheek piece found at Bajč-Vlkanovo site (Nevizánsky 1987, 650, fig. V: 4) is dated almost to the same period. The both finds can de facto represent horse bridling

In the context of mutual interactions a question arises, concerning the share of allochthons in the growth (assertion) of the pastoral economy of autochthons and consequent emergence of new economic and settlement forms (seasonal vertical transhumance, fortified hilltop settlements, and cave settlements) and the more intensive use of horses in the life of the Baden people (*Nevizánsky 1987, 652*). The form of reciprocity can be debatable as well. Did a peaceful coexistence with developing mutual trade relations prevail or were there bilateral tensions? Alternatively, it may be assumed that the acquisition of pastoral economy and the movement of the late Baden populations to mountain regions of the Inner North-Western Carpathians could be caused by a retreat strategy of autochthons motivated by their effort “to hide” the herds from a potential danger, risk of annexation, or loss of vitally important source of living.

### Symbol of enormous herd validity?

On a global scale, changes in the prehistoric climate undoubtedly provoked an extensive change movement, mostly of pastoral-oriented populations. In the Eurasian zone, due to the changing climate, many of the autochthonous populations gradually transformed into semi-nomadic allochthones<sup>7</sup>, looking for the most favourable pastures outside the drying Eurasian steppe, and moving to higher mountain areas of the Caucasus and later the Carpathians.<sup>8</sup> The presence of the Yamna culture in the region of Inner and Outer Carpathians can serve an entirely apposite example (Fig. 2). The extensive transterritorial migration of preferably nomadic steppe pastoralism along with the local transhumance as one of the forms of the inner-Carpathian agro-pastoral economy simultaneously can be an evidence of enormous value of domestic stud: in the both different economic types. Progression of the inner-Carpathian pastoral economy grew on the background of external influences<sup>9</sup>, finally resulting in the high value of the

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and its use for riding purposes in the Inner North-Western Carpathian environment at least from the late Aeneolithic, what approximately corresponds to the knowledge of controlling the horse riding and draught capabilities in the West European and Eurasian regions (*Lichardus 1980; Outram et al. 2009*). A simple way of horse bridling (Fig. 4) could be used as well, which we are not able to identify by archaeological finds. Results of the latest research on skeletal remains (teeth) of horses and traces of milk on pottery can indicate a possible existence of domesticated horses (not only for riding but also used for food, including milk) in the environment of the Botai culture in Kazakhstan (mainly North Kazakhstan was a suitable biotope for wild horses for a long time) in the period about the middle of the 4<sup>th</sup> millennium. In addition to that, the horses seem to be domesticated as first animals of domestic herd, because they can easily adapt to severe winters. They are able to feed on all the year round (including a snow cover) and they do not need any special stable or fodder storing (*Outram et al. 2009*). However, it is also necessary to recall some critical responses to these assumptions, in particular denying the time of domestication of horses in the Botai culture and with this connected their practical use by Botai people, more or less restricted to hunting (*Kosintsev/Kuznetsov 2013, 407*). A particularly high numbers of horses in herds are known in other Eurasian steppe cultures (the Sredny Stog culture, Proto-Yamna culture, and Dnieper-Donets culture), compared with a significantly smaller number of horse bones found at chronologically parallel sites (the Lusatian culture, Tiszapolgár and Bodrogkeresztur cultures, and Boleráz and Bošáca cultures) in the Inner North-Western Carpathian region. Significantly more finds of the antler cheek pieces from the Inner North-Western Carpathians come from the Early Bronze Age (*Hüttel 1981; Mozsolics 1960; Točík 1959; Vladár 1971*).

<sup>7</sup> In the field of cultural development, which occurred in the transition period from the Aeneolithic to the Early Bronze Age, *Y. Rassamakin (2013, 113)* proposed the term “jump” to describe formation of the cultural-historical region of the Yamna culture. There could be several factors behind this fundamental change, such as the environmental change or degradation of Aeneolithic agricultural cultures that resulted in formation of mobile forms of cattle breeding, but also in changes in material complexes of archaeological cultures.

<sup>8</sup> The transition to the more or less present-day climate was not a gradual process, but it took came in two specific episodes. The first of them, which was less serious, ranged between 6 700 to 5 500 years. The second one, rated as a collapse, lasted from 4 000 to 3 600 years. Based on the radiocarbon data, summer temperatures rapidly increased and precipitations significantly decreased, these factors severely affecting ancient civilizations and their socio-economic systems. Especially after 3200 BC, the climate was characterised by severe cold and droughts, which are qualified as the worst and longest drought in Europe since the end of the last Ice Age. This change had a massive impact, for example, also on the Cucuteni-Tripolye culture with its large concentration of population in oversized settlements. Nomadic communities can survive the dry periods much better than cultures with fixed settlements. It was quite logical then that the bearers of the Cucuteni-Tripolye culture changed in the critical dry period their non-functional farming system to pastoral, maybe also owing to the experience of the neighbouring more belligerent Yamna culture. (<https://web.archive.org/web/20091026003035/http://geocities.com/vcmtalk/primalwound.html>)

<sup>9</sup> In his research of Aeneolithic agriculture in the region of the Inner North-Western Carpathians, *G. Nevizánsky (1990, 71–76)* worked with some ethnographic knowledge that he applied also to prehistoric natural conditions. According to him, the significant intensification of food production especially in the late phases of the Baden culture could be caused by introduction of transhumance (which he defines as a pasturage of settled agrarian populations using pastures in two regions that differed in their geography and climate), which enabled effective use of oak and beech forests (mainly pigs). Domestic



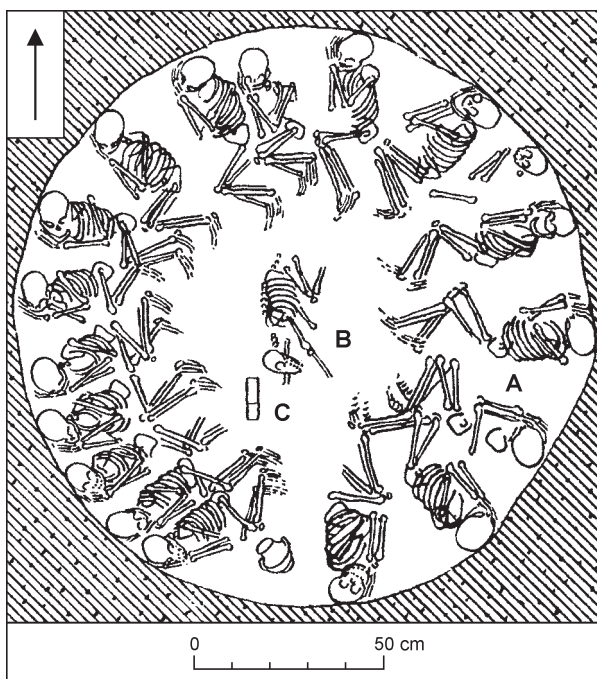


Fig. 5. Nitriansky Hrádok-Zámeček. Multiple grave of 18 individuals and a dog in the centre dated to the Baden culture. Reconstruction (after *Novotný 1958, 112*).

herd; what apparently found its formal expression in blossoming zoomorphic sculpture. The value of domesticated animals deepened process of social stratification, prioritized/privileged owners of herds and attendant apparatus (a multiple grave of the Baden community members in Nitriansky Hrádok with a piously buried dog in the grave pit centre (Fig. 5)<sup>10</sup>, but also similar and markedly older expressions<sup>11</sup> and profoundly projected into the abstract world of Baden autochthons.

The range of zoomorphic figurines found in the Inner North-Western Carpathian territory was more or less analysed in the past, considering their style, type and chronology (*Farkaš 2009; Malček 2010; Nevizánsky 2009; Novotný/Soják 2013; Vladár 1979*), some of them really outstanding by their incredible style, reminiscent of the avant-garde artistic movements of the early 20<sup>th</sup> century.<sup>12</sup> Our ambition therefore, is not another typological study/reflection interlaced with subjective views, but only a general impression based on observing of some compositional elements on the artefacts under study. That is, a part of the database of minute zoomorphic figurines found in the territory of Inner North-Western Carpathians and dated to the turn of the Aeneolithic and

transhumance (agrarian autochthons), however, was performed only by individuals, unlike nomadic transhumance (pastoral allochthons) that was practiced by the entire community. The author seeks the possible sources of the North-Carpathian transhumance (especially bovine animals) also in the Yamna culture environment which, starting from the Polgár culture period could gradually enter a more progressive form of pastoralism to the Carpathian environment (according to the author, ditches at autochthon sites did not have a defensive function against migrants, but it could delimit the herd's place). At the same time, however, in this type of pasture, where the size of transhumant herd in the higher mountainous conditions was limited by possibilities of winter feeding, permanent agrarian settlements remained as well.

<sup>10</sup> In the European context, the unique settlement object of the Baden culture at the fortified settlement of Nitriansky Hrádok-Zámeček was excavated by A. Točík in the 1950s and then published by B. Novotný (*1958, 112*) with no further comment. About 18–20 deceased individuals were buried radially arranged around the inner perimeter of a settlement pit, with a piously buried dog in the central part of the object. Demanding terrain situation at the site (high ground water level) did not allow revealing and documenting the finding situation optimally. The remarkable dislocation of the dog in the centre of the obviously cult object with the mass ritual burial can be the evidence of the important position of the animal in the contemporaneous community. The oldest domesticated animal (maybe with sheep) developed during the co-evolution into the role of man's close assistant and protector (hunt, property, and herd). The field of dog's activities gradually evolved from a routine primeval companion and guardian of a dwelling into the keeping of domestic and breeding animals, especially in times of increasing pastoral activities. With the increasing number of animals in herd, the role of the dog was "specialized" in herding the animals and catching the cattle together. Shepherd dogs excelled in the ability to work with animals, in obedience and mobility as well as in remarkable defensive activity against predators. Extensive animal breeding would not be possible without using the shepherd dog's abilities – it was highly valued and appreciated. The great importance of dogs follows also from the information of L. J. Moderatus (*Columella*) in his work *Res rustica* from the middle of the 1<sup>st</sup> century AD. He probably describes here the experiences with dogs, especially from the regions with advanced sheep pasturage (the mountain pastoral population of the Romanian Carpathians). According to him, every farmer had to keep a dog and prefer it to all other animals, because the dog guards his yard, crop, people, cattle and house. ([https://en.wikipedia.org/wiki/Columella#Res\\_rustica](https://en.wikipedia.org/wiki/Columella#Res_rustica))

<sup>11</sup> A formally approximate, but not analogous situation can be found in the eastern part of the Inner North-Carpathian territory even in the substantially older pre-Baden period. At a burial ground of the Tiszapolgár culture in Velké Raškovce, J. Vizdal (*1977, 111*) excavated an animal grave (sheep/goat) in the central part of one of the groups of inhumation graves. The ritual grave was apparently connected with the other two richly equipped human graves, in which the deceased held a young animal (sheep/goat) in their arms. The named investigator explicates the finding situation within the lines of family community – as a manifestation of the specialized family cult, or a symbolic burial of totemic animal.

<sup>12</sup> A unique statuette of a bull found at Komjatice (*Vladár 1979, 50, fig. 28*) dated to the turn of the Neolithic and Aeneolithic, bears a distinct prehistoric "proto-cubist" habitus.

the Early Bronze Age reminds us similar Trans-Carpathian Eurasian finds. Especially from the typological point of view, the eastern group of zoomorphic figurines appears to be a possible inspiring model for creation of these statuettes in the oicumene of the late Baden communities living in the Inner North-Western Carpathians.

Perceptible similarity of mutual visual representation can be found especially among the zoomorphic figurines from Stránska and minute statuettes originating from sites of the Volyn, Tripolye and Coțofeni cultures (Horváthová 2010, 79). Although a greater part of the late Baden zoomorphic figurines from the Inner North-Western Carpathians is preserved only in fragments, a selected group of figurines 2–6 cm in size seem to show a comparable artistic concept (Fig. 1). The statuettes are characterised especially by the lower stabilizing part, which is fixed by stylized pointed limbs, protruding into the space in an almost stiff poise and typical mainly of the horned cattle. The arches between the limbs represent at the same time the corresponding typological, visual and over-regional element.

Similarly, an expansion in breeding of a new species of long-haired sheep, originally cultivated in the Middle East and transported to the area of the Inner Carpathians in the end of Aeneolithic, can also be considered a consequence of eastern impulses in connection with the increased frequency of minute animal figurines in the space and time under study (Nevizánsky 2009, 31). Finally, the noticeable degree of trade-exchange contacts or direct presence of individuals or groups of people of Eastern origin – rather on the basis of acculturation with no significant influx of the population into the area of the Inner North-Western Carpathians – are evidenced by some archaeological finds. In the context with the zoomorphic figurines, they are especially the above mentioned miniature imitations of the so-called battle hammers, which are known also from the Balanovo culture milieu, or other stone and clay imitations of axe-hammers from the Carpathian environment (Bader 1963, fig. 116, 117; Horváthová 2010, 81), and also the pottery decorated with corded ornament found in several late Baden fortified settlements, as well as other attribute/identifiers.

Translated by PhDr. Ludmila Vaňková

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## Zviera v živote severokarpatských populácií na prelome staršieho a mladšieho praveku

Jozef Vladár – Egon Wiedermann

### Súhrn

Viac ako pozoruhodným nálezom z prostredia záverečných stupňov badenskej kultúry a neskôr kultúr staršej doby bronzovej v severozápadných vnútorných Karpatoch je drobná zoomorfná plastika. Na jej zvláštne postavenie v živote badenských populácií poukazuje vysoký nálezový index, na základe ktorého sa uvedené teritórium radí na popredné miesto v celom stredoeurópskom priestore. Bádateľské prostredie zaoberajúce sa touto problematikou reflektovalo a analyzovalo predovšetkým funkcionalistické pozadie zvieracej plastiky v miestnych spoločenstvách. Sústredilo sa hlavne na tradičnú explikáciu plastiky ako inštrumentária kultového charakteru.

Vylúčiť však nemožno, že zoomorfná plastika bola zároveň už prejavom narastajúcej preferencie pastierskej ekonomiky, teda povedľa kultového mohla nadobudnúť aj sociálno-ekonomický, prípadne environmentálny akcent. V tomto zmysle plastika reflektovala výrazné zmeny kultových praktík v dobe ekonomickej konverzie mladoeneolitických autochtónov, keď kľúčové postavenie v neskorobadenskej ekonomike nadobudlo pastierstvo. Táto zásadná hospodárska zmena nesúca sa v znamení rozmachu dobytčárstva vyvolala s najväčšou pravdepodobnosťou aj zmenu religióznu. Starobylá (neskôr biblická?) tradícia v podobe kultu krvavej obety sa preklenula do novej abstraktnej formy (zoomorfná plastika), čo sa v praxi prejavilo výraznejším zameraním na kultúru kultivovania (dôsledného chovateľstva) existenčne strategických druhov zvierat. V spirituálnej sfére vnútokarpatských spoločenstiev sa zrejme tento trend napokon premietol do zániku tradične praktizovaného kolektívneho kultu obety (Burchbrich) a nástupu individuálneho symbolického rituálu, riadeného kompetentnou osobou (Rybník).

Dôvody nových trendov v hospodárskej a sociálnej štruktúre vnútokarpatských populácií na prelome staršieho a mladšieho praveku je teda možné vysvetliť jednak ekonomicky, nevyhnutnosťou vertikálnej transhumancie pre udržanie a zveladenie stáda, resp. aj kultúrno-historicky ako dôsledku novej populačno-demografickej, či etnickej situácie v Karpatoch a na dolnom Dunaji. V tejto súvislosti je povšimnutiahodný najmä vstup spoločenstiev so step-

nými základmi (jamová kultúra), reprezentovanými nálezmi keramiky so šnúrovým ornamentom a ďalšími atribútmi či identifikátormi do blízkosti badenskej severokarpatskej oikumeny, predovšetkým do prostredia opevnených sídlisk.

Transteritoriálna migrácia skôr kočovne zameraného stepného pastierstva spolu s domácou lokálnou transhumanťou, ako jednou z foriem vnútrokarpatskej agrárnej ekonomiky, môže byť zároveň svedectvom o enormnej hodnote domácich chovov, v oboch rozdielnych hospodárskych typoch. Nárast vnútrokarpatskej pastierskej ekonomiky mohol prebiehať aj na pozadí vonkajších vplyvov (unikátny nález plastiky hlavy koňa s naznačenou uzdou, sygnalizujúcou možnú existenciu jazdcov zo vzdialených oblastí), až napokon vyústil do vysokej hodnoty stáda, čo zrejme našlo svoje formálne vyjadrenie aj v náraste modelovania zoomorfnej plastiky. Hodnota domestikovaného zvierafa prehĺbila socio-stratifikačné procesy, pozdvihla postavenie majiteľov stáda a obslužný aparát a hlboko sa premietla do abstraktného sveta badenského ľudu.

Obr. 1. Severozápadné vnútorné Karpaty, Zakarpatsko a Kavkaz. Výber nálezov drobnej zvieracej plastiky z eneolitu a staršej doby bronzovej. 1–5 – Stránska (*Nevizánsky 2009*, tab. 1: 1–5); 6 – Bratislava (*Farkaš 2009*, obr. 2); 7–13 – Veľká Lomnica (*Novotná/Soják 2013*, obr. 100: 12–16; 103: 9, 11, 12); 14–16 – Lieskovec-Hrádok (*Malček 2010*, Tab. 1: 1, 2; 2: 1); 17–19 – Kavkaz/Kuro-araxská kultúra (*Bybakov 1994*, tab. 14: 10, 16, 24); 20 – Kavkaz/Majkopská kultúra (*Bybakov 1994*, tab. 49: 7); 21 – Ukrajina (<http://www.encyclopediaofukraine.com>); 22 – Rybník (*Bátora 2015*, 126); 23 – Bilcze Zlote/Tripolská kultúra. <https://sk.pinterest.com/pin/321163017167896381/> [22. 1. 2018]

Obr. 2. Severozápadné vnútorné Karpaty. Nálezy zoomorfnej plastiky a zvieracích depónií badenskej kultúry (III–IV) a boľerázskej skupiny na sídliskách z neskorej doby kamennej. 1 – Ivanka pri Dunaji; 2 – Budmerice; 3 – Vác; 4 – Lieskovec; 5 – Veľká Lomnica; 6 – Stránska; 7 – Kopčany; 8 – Komjatice; 9 – Jelšovce; 10 – Šárovce; 11 – Biňa; 12 – Bajč-Vlkanovo; 13 – Svodín; 14 – Bracovce; 15 – Zvolen; 16 – Bojnice; 17 – Pezinok; 18 – Slovenský Grob; 19 – Vysoké Tatry; 20 – Smižany; 21 – Žehra (podľa *Farkaš 2009*; *Malček 2010*; *Nevizánsky 1999*; *Novotná/Soják 2013*). Legenda: a – zoomorfne plastiky z boľerázskej skupiny; b – zvieracie depóniá boľerázskej skupiny; c – zoomorfne plastiky badenskej kultúry (III–IV); d – zvieracie depóniá badenskej kultúry (III–IV); e – oikumena jamovej kultúry v severnom Potisí.

Obr. 3. Severozápadné vnútorné Karpaty. Stredné a horné Ponitrie. Graf frekvencie využívania jaskynných priestorov v korelácii so zmenami klímy od neolitu po halštatskú dobu na lokalitách Bojnice-Prepoštská jaskyňa (*Bárta 1980*), Radošina-Čertová pec (*Bárta 1959*; *1980*), Slatinka nad Bebravou-Dúpná diera (*Bárta 1983*), Omastiná-Vlčia diera (*Bárta 1985*) a Čierna Lehota-Dubná jaskyňa (*Wiedermann 1985a*, 51).

Obr. 4. 1 – Veľká Lomnica-Burchbrich. Pravdepodobne hlava plastiky koňa s naznačenou uzdou (*Novotná/Soják 2013*, obr. 100: 4); 2 – rekonštrukcia prehistorickej uzdy (<https://www.sciencedaily.com/releases/2009/03/090305141627.htm>); 3, 4 – príklady recentného (bezzubadlového a zubadlového) uzdenia.

Obr. 5. Nitriansky Hrádok-Zámeček. Hromadný hrob 18 jedincov so psom v strede z obdobia badenskej kultúry. Rekonštrukcia.

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