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STUDIE A KRÁTKÉ ČLÁNKY
CASE STUDIES AND SHORT ARTICLES
STUDIEN UND KURZE ARTIKEL

Recenzovaná část
Peer-reviewed part
Rezensierter Teil
Abstract

One of the most important sites in terms of view of archaeobotanical grape pip occurrence is Mikulčice. Grape pips have been found there in large quantities and in different settlement contexts so it can be assumed that grape cultivation was an integral component of the inhabitants' subsistence strategy. This site is key to answering the question of the occurrence of wild grapevine varieties in the riparian forests in Moravia. The material from Mikulčice has been subjected to a series of statistical analyses intended to ascertain the morphology of the grape pips and the cultural background of the viticultural tradition in Mikulčice.

Keywords
grapevine – archaeobotany – Mikulčice – Early Middle Ages

Introduction

Great Moravia was a developed power-political formation with Mikulčice as one of its core centres with many functions including Christianisation (Dostál 1975, 1979, 1988; Macháček 2005; Vignatiová 1992; Beranová 2000, 106). Archaeological work in Mikulčice has unearthed a large number of finds: sacred buildings, different types of crosses, liturgical artefacts and items with Christian symbols – that document a significant influence and importance of Christianity at this site (Kouřil 2014; Poláček 2016). As wine is one of the symbols of the Eucharist and hence one of the most important items at liturgical acts, it is unsurprising to discover the presence and cultivation of grapevine for the purposes of the winemaking in early medieval Mikulčice. The church and Christianisation had a significant impact on the beginnings of viticulture in this region. In this period, wine cultivation was not carried out for financial reasons, but mainly a liturgical one (Beranová 2000, 106) though the consumption of fresh fruit, juice and non-liturgical consumption of wine cannot be ruled out. Throughout the entire Early as well as High Middle Ages, the cultivation of grapes was associated with the ruling classes, monasteries and rich bourgeoisie from royal towns (Johnson, Robinsonová 2009; Frolec 1973).

Grape pips found in archaeobotanical material from former Czechoslovakia have been dated as early as the prehistoric times (Tab. 1) (Šálková et al. 2015, 107; Opravil 1977, 363), and more frequently to the Roman times (e.g. Hurbanovo, Hajnalová et al. 2018). In Bohemia and Moravia, grape pips have only been found in Pavlov (Břeclav district) and dated to the Roman times based on the find context. The author claims that these finds have all the characteristics of cultivated vines (Tempír 1991). The grape pips that were dated to earlier periods based on archaeological stratigraphy mainly come from polycultural sites (such as those from the Aeneolithic settlement in Hlinsko near Lipník nad Bečvou, Opravil 1977, 363; 1984) and they have most probably been contaminated by later material. The uniqueness and a small number of these finds most probably attests to importing (Hajnalová 2001, 66–97; Látková et al., in press) and/or Roman provinces (such as Iža and Rusovce, Hajnalová 2001, 66), or barbarian (German) territories near the Roman limes (e.g. Hurbanovo, Hajnalová et al. 2018). In Bohemia and Moravia, grape pips have only been found in Pavlov (Břeclav district) and dated to the Roman times based on the find context. The author claims that these finds have all the characteristics of cultivated vines (Tempír 1991). The grape pips that were dated to earlier periods based on archaeological stratigraphy mainly come from polycultural sites (such as those from the Aeneolithic settlement in Hlinsko near Lipník nad Bečvou, Opravil 1977, 363; 1984) and they have most probably been contaminated by later material. The uniqueness and a small number of these finds most probably attests to importing (Hajnalová 2001, 66–97; Látková et al., in press) and/or
On the Czech and Slovak territories, studies show that the number of the pips found at specific sites as well as the number of sites with such finds increases from the Early Middle Ages (Hajnalová 2001, 66–97; Látková et al., in press). From material dated before the 11th century there are fewer than 10 finds, but the numbers continue to rise from the 11th century onwards and the high medieval material even contain pomace (matoline), a direct proof of wine production (e.g. Bratislava, Kapitulská street, Hajnalová 2001, 67; Brno, Kočár et al. 2014, 143). Documents that can be directly connected with the wine making process are relatively rare. Waste − the remains of grape pressing − was possibly left outside of the traditionally excavated settlement areas (in vineyards or gardens).

With almost two thousand finds of grape pips \( n = 1968 \), the Mikulčice-Valy stronghold is exceptional among the early medieval sites where grapevine remains have been found. Waterlogged, carbonised and mineralised remains of vines and their fruit have been found at almost all excavation areas of the agglomeration (Opravil 1972; 2000; 2003; Látová 2017). Their dating to the 9th century was supported by the results of absolute dating of grape pips from the silted-up river branch that used to run around the Mikulčice stronghold (calAd: 766–899; Barta et al. 2014).

Emanuel Opravil (1972; 1985; 2000; 2003) intensively studied and assessed the grape pips from Mikulčice (1972; 1985; 2000; 2003), and was the first to differentiate the wild \( Vitis vinifera \) from the domesticated \( Vitis vinifera subsp. vinifera \) (Opravil 1972; 2003). Opravil collected his assemblage of more than 1500 finds over a period of almost 40 years of archaeological and archaeobotanical research in Mikulčice. He categorised as much as 49% of all finds as \( V. sylvestris \) the wild grapevine (Opravil 2000, 353). He arrived at this result using Stummer’s basic morphometric method (Stummer 1911).

Another, more complex, attempt at the (re)classification of the Mikulčice finds, is still under way. It uses a combination of two morphometric methods (Stummer 1911; Mangafa, Kotsakis 1996) and it includes not only the Mikulčice finds, but also finds from a wider geographical area (Bohemia, Moravia and Slovakia) with a wider dating range (Roman to modern times) and it was also applied to the pips of wild grapevine (Opravil 2000, 353). He arrived at this result using Stummer’s basic morphometric method (Stummer 1911).
confirms the specific character of the early medieval finds. Overall, the Mikulčice assemblage contains mostly smaller, shorter and wider pips with a short stalk (Látková et al. in press), which are typical of uncultivated wild grapes (*Vitis sylvestris sensu stricto*, hereinafter *s. s.*, Bouby et al. 2013, 2). This species is supposed to be typical for what is known as morphological homogeneity, i.e. uniformity of shape (Pagnoux et al. 2015, 7). A comparison of the range of the dimensions of the parts of the pips from Mikulčice and modern-day wild grapevine shows that the Mikulčice specimens have a greater variability than the wild grapevine pips, which is interpreted as a proof of the cultivated variety (Látková et al. in press).

The aim of this study is to clarify the nature of the Mikulčice grape pips and to interpret the findings from a cultural-historical perspective. This involves defining whether the finds of grape pips from Mikulčice prove a local cultivation of grapevine or an importing of finished goods – wine.

**Material**

Out of the total number of 1968 finds of complete or fragmentary grape pips, the 208 best-preserved pieces, waterlogged and undisturbed, were used for the analysis in this study. These finds come from early (Opravil 1972; 1985; 2000; 2003), as well as more recent excavations (Látková 2017). Unfortunately, a substantial part of the early finds collected by Opravil was destroyed by the 2007 fire of the Mikulčice research base and is no longer available. The finds of grapevine from contemporary archaeological excavations at the Mikulčice agglomeration come from a large spectrum of archaeological features and contexts – a silted-up river bed, pits of all purposes, residential buildings, fortification systems etc. In the case of the early material (Opravil 2000) the context of the finds is mostly unknown, but it can be assumed that they originate mostly from the excavations of the extinct river branch of the River Morava or the acropolis of the stronghold.

**Modern reference material**

The recent specimens of wild grapevine was acquired and assessed at five sites in south-west Slovakia and central Hungary. In three sites (Veľký les near Šurany, Slovakia and two sites on the territory of the Mužla-Čenkov municipality) the samples were obtained from botanical research. At these sites wild grapevines were a natural part of forest vegetation. This comparative material was harvested during the autumn months of 2017.

Wild grapevine, *Vitis sylvestris, sensu stricto* was determined by Pavel Eliáš Jr. based on multiple features. The individuals discovered at these sites are dioecious plants whose leaves have wide lateral sinuses between the basal and lateral lobes, small infructescences and berries of less than 1 cm in diameter. Some of the features may be regarded as controversial or subjective, such as the size of the inflorescences and berries. Interestingly, the leaves of the male and female plants of *V. sylvestris* vary in shape. The leaves of the male plants have deeper lateral sinuses, resembling the common grapevine (*Vitis vinifera*). Another difference is the colour of the leaves in the autumn: *V. sylvestris* turns red, while *V. vinifera* turns yellow.

More data for the comparison of the pips of wild and common grapevine come from the comparative collection of recent pips by Mária Hajnalová (for a more detailed description of the pips of wild grapevine see Látková et al. in press).

**Methods**

The first step in the processing of the material was basic measurement – the measuring of strictly defined parts of the pips (Fig. 1). The measurements concerned the total pip length (L), length of the stalk (LS), distance from the stalk to the chalaza (PCH) and breadth (B). All the pips, both archaeological finds and recent specimens, were measured for these values, using the SMZ 18 Nikon stereoscopic microscope.

![Fig. 1. Measured parts of the grape seeds: L – length, LS – length of the ventral beak, B – breadth, PCH – distance from the ventral beak to the chalaza. After Mangafa Kotsakis, 1996.](image)

**Statistical analysis**

In the second step, the dimensions measured on the Mikulčice finds and the living samples of wild grapevine from Slovakia were subjected to principal component analysis (PCA) in the CANOCO program. The variables in the analysis included different proportions of the four dimensions – total pip length,
Results and discussion

The cultivation of grapevine is considered a rather demanding agricultural activity, mainly because of a slow return of the invested energy. For this reason, a higher form of social and economic organisation (managed centrally or communally) is assumed in a community that engages in it. The latest results of an archaeobotanical research focusing on building up a picture of agriculture and the (palaeo)economical status of different residential areas in Great Moravian Mikulčice (Látková 2017, 101–106) shows that the existence of a higher level of social organisation connected with the mobilisation of agricultural labour was possible in Mikulčice.

General results

In the assemblage of archaeobotanical finds, in the “fruit and delicacies” group, grape pips are among the most common. In the current excavations of the settlement areas in Mikulčice, which have been systematically archaeobotanically researched – deposits are sampled and flotated – grape pips have been documented at all sites. Considering their high frequency, they can be considered a common fruit in Mikulčice, which is in a contrast with the findings from other contemporary sites of similar character (Látková 2017, 58).

Based on the measurements (Tab. 2) the Mikulčice grape pips can be generally characterised as small-
er, with a rounded base and a relatively short stem. A comparison of the minimum and maximum values of the length (L), the distance of the chalaza (PCH) and breadth (B) shows a large difference between the measured indices, which indicates a high variability in the assemblage. Such variability has not been record-
ed in the evaluations of any assemblage of grape pips from the Czech, Moravian and Slovak archaeological sites (Látková et al. in press). A high variability of pip shape and size is a characteristic of cultivated variet-
ies (Vitis vinifera s. s., Pagnoux et al. 2015, 7). The variability and the measured dimensions of the Mi-
kulčice grapevine samples are similar to the samples from uncultivated wild grapevine from modern-day Slovakia (Látková et al. in the press, Fig. 2). The dif-
ferences between the finds are not specifically linked to a specific type of preservation, a single area or the silted-up river branch.

Mikulčice – the key site

The earliest frequent finds of grape pips in the Czech, Moravian and Slovak archaeological sites are dated to the Early Middle Ages, an era which probably saw the beginnings of grapevine cultivation in this region (Hajnalová 2001, 44; Hajnalová, Elschek 2015, 115). In the Early Middle Ages, a great concentration of finds has been recorded at sites with Christian sacral structures and the documents of the inhabiting of so-
cial elites (e.g. Nitra-Hrad and Břeclav-Pohansko). We can thus hypothesise that the production of grapes was not common, but conditioned by Christian liturgy and/ or the satisfaction of the demands of a higher social class. It is doubtful whether the available knowledge and methods are able to separate these two influences.

Mikulčice-Valy is probably a key site for the re-
search of grapevines: it is the only early medieval site...
of central character featuring a large number of sacred buildings along with the documents of the presence of early medieval social elite and a large number of grape pips (dated by means of absolute chronology into the 9th century, Barta et al. 2014). The site was once a riparian forest where wild grapevine (var. *Sylvestris*) is likely to have grown. This variety could be used for the making of wine (of much worse quality and taste) (Rösch 2014).

**Correspondence analysis**

The similarities and differences between the early medieval pips from Mikulčice and recent pips were evaluated by means of the principal component analysis (PCA), a multidimensional statistical method. The statistical analysis included all waterlogged pips with undamaged upper parts of skin. These variables were based on the measurements of the dimensions of different parts of the pips (L – length, LS – length of stalk, PCH – chalaza position and B – breadth), expressed in relative units – proportions and shares – as well as specific dimensions.

The PCA results are presented in a graphic form, where the values from the matrix are depicted on the axes. The analysis focused on the identification of the relationship between the different groups of grape pips (the Mikulčice and modern-day pips of wild grapevine) based on the metrics of their parts. The samples were of grape pips, which are classified based on the site of their origin. The ideal procedure to be used with the multidimensional statistical analysis was the evaluation of the measured values (L, LS, PCH and B), where the variables explain the clear variability of the assemblage as early as on the first three axes (fig. 3, 4). The result of the analyses shows that the finds from Mikulčice are much more variable than the pips of uncultivated wild grapevines, which are clustered only based on locality, or more precisely, biotope of their origin. Part of the Mikulčice finds is similar to the pips from the Veľký Les site, while another part is similar to the Mužla – Severný okraj lesa (northern outskirts of the forest), or more precisely, the embankment. Both the biotopes of Veľký les and Mužla – Severný okraj lesa are significantly shadowed and the examined plants produce berries with a greater number of pips, most frequently three to four pips per berry. These pips can be described as elongated (narrow and long) with a long stalk and a larger distance from the chalaza to the stalk. On the other hand, the pips from the sunny biotope in Mužla, on the bank of the Danube River (southern outskirts of the forest) differ significantly from the Mikulčice archaeobotanical specimens. These pips come from grapes with only one or two pips per berry (Fig. 5). These can be described as broader with a short stalk closer to the chalaza. These pips are the most similar to the pips of uncultivated wild grapevine (Bouby et al. 2013, 2).
Kruskal-Wallis test

This test reveals whether the differences between the medians of the tested groups are statistically significant (there is a relationship between the variables) or whether they are random (Rimarčík 2007). The zero statistical hypothesis of the equality of all medians was tested. The testing was carried out on the level of all the variables (L – length, LS – length of stalk, PCH – chalaza position, B – breadth) expressed in concrete dimensions.

Using this test, an analysis was carried out which focused on the clarification of the relationship between the Mikulčice archaeobotanical finds from different parts of the agglomeration and recent pips of wild grapevine. The analysis indicates that in the case of length (L) and breadth (B) there is a statistically significant difference. Based on this analysis the Mikulčice pips can be described as smaller and more lightly built than the pips of the modern grapevine. However, the assessment of the stalk length and the position of the chalaza (PCH) suggests there was not a statistical difference in these variables (Fig. 6–9). The median value of the two groups was almost identical, however, there were differences in the minimums and maximums as well as in the distribution of the top (25%) and bottom (75%) values.

Fig. 5. Principal component analysis (PCA) of the similarities between the grape pips from the Mikulčice archaeobotanical material and recent samples from all the researched sites, which uses relative units from the measurements (B/L and LS and PCH ratio).

Fig. 6. Results of the Kruskal–Wallis test, which compared the medians of the Mikulčice archaeobotanical finds with recent grape pips, considering the total length of the pip (L).

Fig. 7. Results of the Kruskal–Wallis test, which compared the medians of the Mikulčice archaeobotanical finds with recent grape pips, considering the total length of stalk (LS).
Summary of statistical methods
Considering the relatively early and plentiful occurrence of grapevines and the character of the grape pips, Mikulčice is a special site. Also the fact that they used to be in the floodplain environment of a riparian forest is worth noting. The wild grapevine can occur as a natural part of such environment (Maděra, Martinková, 2002, 484).

The results of multidimensional statistical analysis can also be interpreted in such a way that the dissimilarity of the Mikulčice finds from the “typical” finds of uncultivated wild grapevine (V. sylvestris) together with the much larger and broader variability of the early medieval assemblage mean that the Mikulčice finds come from a cultivated variety.

The non-parametric Kruskal-Wallis test proved the significant difference in some of the assessed features of the Mikulčice finds and the pips of the recent wild grapevine. In some respects the pips were different (length and breadth), whereas in others, (length of stalk and the position of the chalaza), they did not. These analyses can also be interpreted as suggesting that the grape pips found in Mikulčice probably constitute proof of fruit cultivation, perhaps of an archaic, primitive or extinct cultivar whose pip morphology – and probably also other properties that cannot be defined by means of archaeobotanical methods – were close to those of wild grapevine (Vitis sylvestris s. s.). Environmental conditions can influence the size of pips, but not their basic shape (Pagnoux et al. 2015, 7). When grown in unsuitable conditions grapevines can become damaged in certain ways, however, this is not reflected in the morphology of pips to such an extent that a pip of a grown cultivar had all the characteristics of wild grapevine. The analyses clearly prove that the studied assemblage contains pips with all the traits of wild grapevine, on the other hand, there are finds that can be definitely interpreted as cultivated varieties. If wild grapevine (Vitis sylvestris s. s.) was plentiful – or at least common – in south Moravia in the Great Moravian period, its occurrence would have also been documented at other similar sites of earlier and later dating.

The fundamental question is why the finds of grapevines are so rare or completely absent in the prehistoric and protohistoric periods, while their number rises rapidly as late as the post-Great Moravian period. One explanation may be that uncultivated wild grapevine was not in the centre of attention when collecting forest delicacies in the prehistoric period. Later, in the Early Middle Ages, when the consumption of wine rose, the cultivation of local grapevine might have occurred; it is also important to keep in mind that other wild-growing species were introduced at that time, such as wild cherry (Opravil 1972, 20). In spite of this inconsistency, the Mikulčice finds of grape pips can be considered proof of a centre where the beginnings of Central European viticulture and wine making took place.
Viticultural and wine-making tradition in Mikulčice

In modern times, the viticultural and wine-making tradition in Mikulčice and Těšice is often linked with the Great Moravian period (e.g. The Great Moravian wine tasting). To explain this, it is necessary to focus on historical texts and iconographic sources as well as local ethnographic observations of the wine-making culture. The oldest source that can be used here is the work of Comenius. Jan Amos Komenský was born on 28th March 1592 in Uherský Brod, Moravia. His father probably managed the local hills in Blatnice where vine was grown. In his work Orbis sensualis pictus Comenius provides a detailed description of vineyards and the work performed there. His map of Moravia dated circa 1624 is also very valuable.

Despite the fact that the map is schematic and its veracity is debatable, it is one of the few historical sources that can be used. The section of Comenius’s map depicting the area of the Mikulčice stronghold and the neighbouring villages (Fig. 10) clearly suggests that there were no vineyards around Mikulčice. Comenius depicted the vineyards of his time outside of the floodplain area. The vineyards depicted on the map are near the villages of Dolní Bojanovice, Velké Bílovice, Mutěnice and others. On the Slovak side of the River Morava, there are vineyards on the foothills of the White Carpathians, Skalica and Holfič. Despite certain inaccuracies that can be ascribed to the time when the map was created it is a valuable piece of work that does help to localise 17th-century vineyards.

A source that captures the occurrence of the 18th-century vineyards is the first military map (1763–1787). The study of this source also documents the absence of vineyards in the Mikulčice area (Fig. 11). The closest documented vineyards were at a river terrace near Moravská Nová Ves. Vineyards have also been recorded near what is now Dolní Bojanovice, Kukvice (a medieval village that no longer exists, close to what is now Josefov) between Prusánky and Moravský Žižkov, and in Skalica, Slovakia. The highest concentration of vineyards in this era is near Kukvice. Vineyards were founded there because of soil composition, slope orientation and climatic conditions suitable for grapevine cultivation.

Historic and ethnographic research has revealed that the current tradition connected with winemaking in this area can be dated from the end of the 18th to mid-20th centuries (Havlík 2010, 6). A credible source from 1656 (an urban record) states: "Vinohradů při tej dědině Těšíčích žádných se nenachází: nicméně mají vinohrady, tak jakž Specifiati y actimati se najde v hoře Kukvice." (There is no vineyard near the Těšíche village; however, they do have vineyards, as Specifiati y actimati, at the Kukvice hill.) Kukvice
is a medieval village on whose territory a new settlement, Josefov, was founded in 1782 (Helešic 1982, 3). This village is approximately 5 kilometres from today’s Mikulčice. Vineyards in medieval Kukvice are mentioned in urban records from 1656 and also in the land register. The Opersdorf urbarium from 1691 contains, apart from basic information, the names of citizens who farm the vineyards in Kukvice (Havlík 2010, 37). This source provides the information that most of the people who grew grapes in Kukvice were from Těšice. The people from Mikulčice also had their vineyards in Zadní kukvická hora (Havlík 2010, 37). Even nowadays some of the winemakers still have vineyards rented in Josefov. It is clear from the local chronicles that Mikulčice and Těšice were not traditional viticultural villages – their emblems do not contain typical wine-making motifs. The source Topographie von Markgrafthum Mähren von Franz Jos. Schwoy from 1793 informs us that Mikulčice and Těšice do not have soil suitable for the growing of vines and do not even have the right to do so unlike the surrounding villages. On the other hand, the citizens of Mikulčice and Těšice used to own vast pastures and meadows that produced hay, which was valuable because of the high biodiversity of the place. This valuable commodity was not found in Kukvice, which is why these lots were often exchanged for vineyards (Havlík 2010, 40).

Despite the fact that there is proof of viticulture in Mikulčice as early as the Great Moravian period, written sources and ethnographic observations show that there has not been a continuous viticultural tradition from Early Middle Ages to the present day.

### Conclusion

Mikulčice-Valy proves to be a key site for the research of viticulture in the Central Europe: it has unearthed a large number of grape pips, furthermore, it is situated in a riparian forest where the liana of wild grapevine (Vitis sylvestris s. s.) can be a natural part of the forest vegetation. Grapevines are among the most frequently found fruit species in the Mikulčice agglomeration (Látková 2017, 58). Considering the high frequency it can be assumed that in early medieval times, Mikulčice grapevine was quite a common fruit species, which is uncommon at other contemporary sites. Visual evaluation and statistical analyses have shown that the archaeobotanical material from Mikulčice contains mostly grapevine pips that can be described as smaller, rounded at the base and with a short stalk. On the other hand, the material is rather variable: it also contains longer, more lightly-built grape pips with longer stalks.

This paper presents a comparative analysis of the Mikulčice grape pips and recent material from modern-day plants. As of 2015, the total of 1968 grape pips had been found in Mikulčice, 208 of which fulfilled the criteria that qualified for the analyses. The results of the archaeobotanical analysis were compared with historical and ethnographic parallels, which documented the viticultural tradition in Mikulčice. Archaeobotanical data and the recent pips of wild grapevine were assessed using different statistical methods.

The principal component analysis (PCA) has proved that some of the grape pips found in Mikulčice have dimensions and their ratios are similar to those in cultivated species of grapevine, while others are closer to uncultivated wild grapevine. The results of non-parametric Kruskal-Wallis test show that the Mikulčice and recent grape pips share some traits (length and breadth), and they differ in others (length of stalk and the position of the chalaza). The results of the statistical analysis can be interpreted on two levels: 1) the Mikulčice pips are proof of a cultivated fruit of a more archaic type where the pip morphology was similar to the one of uncultivated wild grapevine; 2) it can be assumed that the Mikulčice pips document an initial attempt to cultivate local wild grapevine.

Whichever interpretation is taken, the Mikulčice finds can be considered proof of the cultivation of grapes in one of the Great Moravian centres where early attempts at viticulture and wine making took place. The position of the vineyards is an issue that remains unresolved. Considering the current state of knowledge it can be only assumed that the vineyards were close to the stronghold and that grapevine was cultivated in similar places as other crops, such as cereals and legumes. This assumption can also be
deduced from later iconographic and written sources where the cultivation of grapes is connected with a church or monastery environment (Froloc et al. 1973). Compared to the production of basic foodstuffs, such as cereals and legumes, the cultivation of grapes is a rather demanding "superstructural" agricultural activity because of a slow return of the energy invested in the vineyard. Intentional founding of vineyards and the cultivation of grapevine is evidence of a high standard of living and developed agriculture. In the High Middle Ages the cultivation of grapes was associated with the elite and monasteries (Froloc et al. 1973). However, this state can be assumed with certainty in the Early Middle Ages. The finds that document a significant influence of Christianity in Mikulčice and the character of the site allows us to hypothesise that wine was an inseparable part of Christianisation, liturgy and Eucharist. This explains the high occurrence of grape pips in the archaeobotanical samples from Mikulčice.

Although viticulture developed in the Great Moravian Mikulčice, it has not been a permanent fixture until the present day. Based on written sources and ethnographical observations it is clear that following the Great Moravian period the first vineyards appeared as late as the 19th century. Despite the fact that Mikulčice probably laid the foundations of viticulture in this area, it cannot be considered a typical wine-making south Moravian village with a long tradition of grape cultivation.

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References


Resumé

Vinná réva je v archeobotanickém materiálu obecně považována za nejčastější doklad pěstovaného ovoce u všech historických populací. Z toho důvodu je ozježenání charakteru a domestikace jedním ze základních předmětů archeobotanického výzkumu. Pěstování révy, jejíž plody a produkty byly významnou komoditou, bylo pro mnohé historické národy a archeologické kultury důležitým zdrojem obživy a obchodování vínem bylo základem jejich hospodářství. Z ekonomického hlediska tedy vinohradnictví vyvolává také o charakteru zemědělství daných komunit, které se jím zabývaly. Pěstování vína je poměrně náročnou zemědělskou činností, a to zejména z důvodu pomalé návratnosti vložené energie a práce. Je nepochybně mnohem náročnější než pěstování obilí. Z uvedených důvodů, je nutné při zkoumání společností, o kterých víme, že se produkcí vína zabývaly, předpokládat ekonomiku na vyšším stupni vývoje, respecte výskytu lesní révy v lužních lesích Moravy. Na základě konstrukce některých faktorů je možné předpokládat pěstování různých lokálních, vyhynulých, případně kultivarů, které velkomoravská společnost v Mikulčicích preferovala.

Z hlediska počtu archeobotanických nálezů pecek vinné révy patří prvenství lokalitě Mikulčice-Valy, zde se našly v široké škále sídlištních (obytné objekty a kulturní vrstvy), ale i přirozených (zaniklé říční koryto) kontextů. Celkově z Mikulčic pochází 1968 pecek vinné révy, které byly zakonzervovány južně náročnější než pěstování obilí. Z uvedených důvodů, je nutné při zkoumání společností, o kterých víme, že se produkcí vína zabývaly, předpokládat ekonomiku na vyšším stupni vývoje, respektive řízenou (centrálně nebo komunitně).

Cílem tohoto příspěvku je vyhodnocení archeobotanických nálezů vinných pecek z velkomoravského hradiště Mikulčice-Valy, které jsou konfrontovány s recentními peckami divoce rostoucí lesní révy z jihozápadního Slovenska. V Mikulčicích se tento typ nálezů nachází ve velkém množství, a to v různých sídlištinách situacích. Právě na základě poměrně vysokého koncentrace nálezů je možné předpokládat, že pěstování vína mohlo tvořit integrální složek subsistencechních strategií zde žijících obyvatel. Tato lokalita je také klíčová z hlediska odpovědi na otázku týkající se výskytu lesní révy v lužních lesích Moravy. Na základě konstrukce některých faktorů je možné předpokládat pěstování různých lokálních, vyhynulých, případně primitivních (z dnešního úhlu pohledu) kultivarů, které velkomoravská společnost v Mikulčicích preferovala.

Přestože již ve velkomoravském období máme v Mikulčicích doklady vinohradnictví, na základě příznaků pramenů a etnografických pozorování je zřejmé, že nelze předpokládat kontinuální pěstování révy od období částečného středověku do současnosti.

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