

Comparative Analysis of Plant Finds from Early Roman Graves in Ilok (*Cuccium*) and Šćitarjevo (*Andautonia*), Croatia – A Contribution to Understanding Burial Rites in Southern Pannonia

Renata Šoštarić¹, Marko Dizdar², Dora Kušan³, Vladimir Hršak¹ and Sara Mareković¹

¹ Department of Botany, Faculty of Science, University of Zagreb, Zagreb, Croatia

² Institute of Archaeology, Zagreb, Croatia

³ Archaeological Museum, Zagreb, Croatia

ABSTRACT

A comparative archaeobotanical analysis of the plant remains from the Early Roman incineration graves in Ilok and Šćitarjevo shows the existence of a complex burial ritual, but at the same time enables a better understanding of the agriculture and trade of the 1st/early 2nd century AD in southern Pannonia. Most of the cereals found (*Hordeum vulgare*, *Panicum miliaceum*, *Triticum monococcum*, *T. dicoccon*, *T. aestivum* i *T. cf. spelta*), the legumes (*Lens culinaris*, *Vicia ervilia*) and the fruit contributions (*Cucumis melo/sativus*, *Malus/Pyrus sp.*, the *Prunus avium* group, *P. domestica*, *Vitis vinifera*) were probably grown in the vicinity of the investigated localities, but they might at the same time have been trade goods. Trade was undoubtedly well developed at that period, as shown by the remains of the fig (*Ficus carica*) and olive (*Olea europaea*), typically Mediterranean crops, in the finds. All the species of cereals, except millet (*Panicum miliaceum*) in Šćitarjevo, and of bitter vetch (*Vicia ervilia*) found in the Ilok grave were carbonised and were probably placed on the funeral pyre with the departed. The lentil (*Lens culinaris*) and the other fruit remains were non-carbonised and mineralised, which means that they were placed in the grave in fresh, dried or cooked form as food for the deceased (belief in an immortal soul), as remains of the funerary feast, or as a sacrifice to the gods.

Key words: plant remains, incineration graves, burial rites, Roman times, Ilok, Šćitarjevo, Croatia

Introduction

This paper presents a comparative analysis of plant remains from two Early Roman incineration graves from the 1st/early 2nd century AD found in Ilok (*Cuccium*) and Šćitarjevo (*Andautonia*). The common characteristic of both graves is burial in a wooden casket, in which numerous articles of attire and jewellery and items of everyday use were placed with the deceased. A grave in Šćitarjevo is particularly rich in finds, which indicate that it belonged to a deceased woman from the upper urban class of Andautonia. A grave in Ilok, located on the former Danube limes, besides imported items from northern Italy, also contained pottery of local origin, whereby the grave can be attributed to a distinguished member of the old Celtic-Pannonian community. There were a lot of discussions about understanding the Roman burial practise and how representative could be material found as

grave goods¹⁻³. It was not intention of this article to give general reconstruction of burial customs in Roman time, but to give a contribution to understanding burial rites in Southern Pannonia from archaeobotanical point of view. The plant remains found in both graves constitute a portion of the burial goods of the deceased, and they facilitate a better understanding of burial rites, agriculture and trade in the Early Roman period in the territory of northern and eastern Croatia.

Context: Burial customs in the Roman period

During Classical Antiquity, the burial of the deceased within the boundaries of a town was strictly prohibited by law, so the deceased were buried in cemeteries outside of the towns which were located along access roads, in ar-

eas of so-called »cities of the dead« (*necropolis*). Smaller settlements (*pagus, vicus*) and rural estates (*villa rustica*) also had smaller cemeteries for their deceased nearby. To ensure that it was as visible as possible, graves were placed along the main road that led to the town, as in Andautonia, and when all of the more prominent places were occupied, it spread along smaller access roads. Sometimes larger family tombs were also raised, while grave monuments documented the burial of several deceased in one grave, even though individual graves were more numerous.

The rules governing burial rites for the Romans were very precisely defined. Cremation of the deceased, which was characteristic at the beginning of the Empire, was done at the cemetery, where there were special places for this (*ustrinae*), although cremation could also be done in the grave itself (*bustum*). A bier with the deceased and offerings and provisions were placed over a pyre (*rogus*). After the deceased was cremated together with the offerings, the remains of the fire were doused with water and wine, and scented oils were poured over the charred bones, which were then collected and placed in an urn that could be made of glass, ceramic or stone; they could also be bound in fabric or leather and placed at the bottom of the grave⁴. The deposits of the charred remains of the deceased with accessories and provisions from the graves in Ilok and Šćitarjevo in oak coffins, based on comparisons with this form of grave architecture at Roman necropolises in south-western Pannonia up to the middle of the 1st to the 2nd century AD, for now only testify to the prominent status of the deceased buried in them, while the origin of such methods of burial remain unclear for the time being. Also, depending on the status of the deceased and their families, urns were deposited in family tombs or in simple pits in the ground. Various items were deposited in graves, such as parts of the attire and jewellery of the deceased, followed by vessels holding oils and perfumes and everyday items, such as vessels containing food and beverages as provisions for the after-life⁴⁻⁵. All of these accessories were deposited in graves in Ilok and Šćitarjevo, together with plant remains, which testify to the existence of defined rules for burial rites and the obligation of depositing provisions for the after-life.

Description of the sites

Ilok (*Cuccium*) is in Western Syrmia at the extreme eastern border of Croatia (Figure 1), standing on the western foothills of the Fruška gora highland zone where its edge terminates on the high loess banks of the Danube River. Due to this prominent location, the narrower territory of the town of Ilok has been inhabited through all prehistoric periods, while during the Roman era there was a fortification here with a civilian district. The latter constituted a vital defence point on the Danube limes which was at the time the Empire's northern border. Ilok experienced its peak in the late medieval period in the 15th and 16th centuries during the reign of the Ilok princes, who raised a fortification with a palace, monas-

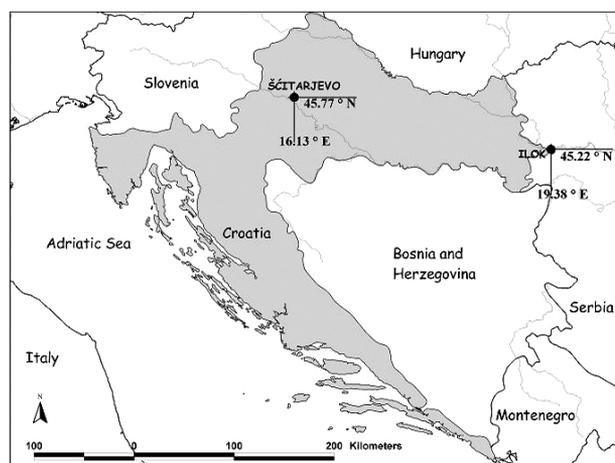


Fig. 1. Geographical location of the investigated localities – Ilok and Šćitarjevo.

teries and churches on the high banks of the Danube. Due to reconstruction of the palace, in 2000 the Institute of archaeology launched excavations in which finds were discovered in subsequent years that testify to the medieval, ancient and prehistoric past of Ilok and the Croatian Danube region. There is scant data on the Roman settlement in the Ilok area in a few itineraries in which different variants of its name are cited: *Cucci, Cuccio, Cuccium, Catio* and *Cuccis castellum*. The Roman settlement was further west than the late medieval palace of the Ilok princes. It was in this Roman settlement that the remains of a grave were uncovered during excavations in 2002. The grave indicates the existence of an Early Roman incineration necropolis in which even members of the original Celtic-Pannonian population, who began to assimilate to Roman culture, were buried. The other cemeteries, dated to the 1st to 4th centuries AD, were located next to the road which led from Cuccium to Syrmium, Cornacum and Basianae. Prior to the 1st century Early Roman necropolis, there was a Scordisc settlement at the same site (from the 3rd to 1st centuries BC), while later the Roman settlement expanded to encompass this area, which is shown by pits and numerous finds of money and pottery dated to the 3rd and 4th centuries AD.

The remains of grave 1 (Figure 2), which was probably an cremation burial, contained traces of a wooden coffin in which accessories of diverse origin were deposited. The wooden casket was found in a rectangular grave pit with rounded corners and dimensions of 2.12 x 1.88 m (north-south to excavation profile). The grave accessories were deposited in the north-eastern corner and along the eastern side of the wooden coffin, of which the bottom boards and the holes for posts in the corners and middle of the longer side of the grave pit were preserved. Two hand-crafted pots with rounded bodies and flat bottoms and fragments of dark-grey bowls with S-profiles made on a pottery wheel were found in the corner of the grave. They belong to the autochthonous traditions of



Fig. 2. Early Roman incineration grave of Ilok (Cuccium).

the La Tène culture of the Scordiscs. A large number of imported items were deposited in the grave, such as a dark-grey bowl with thin sides, a token made of dark-blue glass paste, a glass vessel (funnel), a ceramic lamp, a bronze earring, the handle to a bronze vessel and Claudian era coins. These items are of northern Italic origin and they date the grave to the middle of the 1st century AD. It belonged to a distinguished person of autochthonous Celtic-Pannonian origin⁶. During examinations around and in both pots, numerous plant finds (seeds and fruits) were discovered, so that the content of the vessels and the materials found around them were preserved for archaeobotanical analysis. It is not surprising that two situla-shaped vessels contained plant remains, since as kitchen pots they were used to prepare food, both during the Scordisc La Tène culture from the 3rd to 1st centuries BC and later in the 1st and early 2nd centuries AD, when they were replaced with kitchen vessels typical of Roman provincial culture.

Šćitarjevo (*Andautonia*) was, during the Roman era, located in the territory of today's village of Šćitarjevo, approximately ten kilometers south-east of Zagreb (Figure 1). The town was situated on the plain of the Sava River basin. This location that had exceptional transit importance, as the Roman road *Poetovio-Siscia* crossed the Sava River here. Since the Sava River was used for transport, *Andautonia* was certainly a major river port on the Sava. Previous archaeological research has confirmed that life in this town continued from the 1st to the 4th centuries AD. The core of the settlement and the earliest urban zone was situated on the elevated *Gradišće* site, where public and residential structures were discovered, as well as parts of town streets and drainage canals that reflect the highly-urbanised way of life of its residents. In the first and early second centuries, the town did not extend outside of the boundaries of *Gradišće*, and its dimensions were approximately 450 m (north-south) by 150 m (east-west). This is indicated by necropolises located to the south and east of *Gradišće*, with access roads



Fig. 3. Early Roman incineration grave of Šćitarjevo (*Andautonia*).

that led to the settlement. *Andautonia* did not have the rigidly defined form of Roman towns, because only the higher areas were suitable for habitation due to the danger of flooding. Thus, after a larger flood in the first decades of the 2nd century, the town's expansion was only possible on the raised terrain along the main road that passed by the town to the south, so the urban territory grew along a relatively narrow strip of approximately 800 x 400 m, retaining the elongated form it had acquired earlier. During research into the southern *Andautonia* necropolis in 1996, conducted by archaeologists from Zagreb's Museum of Archaeology, graves with pits of various sizes were discovered that contained deposited urns with the charred bones of the deceased and accessories. Particularly interesting is grave 1 (Figure 3) containing a wooden structure. It differs from the other graves in terms of form, dimensions and quantity of accessories, and it has been dated to the end of the 1st/beginning of the 2nd century AD. This is a grave with larger dimensions (1.6 x 3.2 m) and a wooden construction, of which the remains of small beams on the lateral sides and the boards that covered it were discovered. Many ceramic and glass vessels and metal items, parts of attire and plant and bone remains were deposited in it. Almost all ceramic and glass vessels were in tiny fragments, of which individual pieces were found in various parts of the grave, obviously moved around by flood waters. Eight ceramic pitchers, one coarsely worked biconical bowl, two ceramic lamps, six glass cups, a glass plate, and two glass bowls with twisted edges were deposited in the grave, while a glass urn contained the remains of a deceased woman. Many fragments of other ceramic and glass vessels were also discovered in the grave. Among the apparel items a pair of bronze »multi-piece fibulae« and a pair of shoes were discovered, of which only the iron rivets of the soles remain. Another exceptional find is a bronze box with a wax seal. The grave has been dated by the Trajanic era coins to the end of the 1st/beginning of the 2nd century AD. The quantity of charred bones found was not sufficient for anthropological analysis, but based on the character of the apparel items (fibula, small

TABLE 1
THE LIST OF PLANT TAXA FOUND IN SAMPLES IN ROMAN
GRAVES OF ILOK AND ŠĆITARJEVO

Taxa: / Sites:	Ilok	Šćitarjevo
Cereals:		
<i>Hordeum vulgare</i> L., grain, C	5	
<i>Triticum aestivum</i> L., grain, C	15	
<i>Triticum dicoccon</i> Schrank, grain + glume base, C	18+1	
<i>Triticum monococcum</i> L., grain, C	7	
<i>Triticum cf. spelta</i> L., grain, C	1	
<i>Panicum miliaceum</i> L., grain and glume, C+NC	23+3	0+1123
<i>Cerealia</i> , grain (fragment), C	97	
Pulses:		
<i>Lens culinaris</i> Medik., seed, NC	240	156
cf. <i>Lens culinaris</i> , seed, NC		7
<i>Vicia ervilia</i> (L.) Willd., seed, C	13	
Oil Crops:		
<i>Camelina sativa</i> (L.) Cranz s.l., seed, NC		2
<i>Olea europaea</i> L., stone, NC	4	
Fruits and Vegetables:		
<i>Cucumis melo</i> L. / <i>C. sativus</i> L., seed, NC	1	1
<i>Ficus carica</i> L., pip, NC	25	16
cf. <i>Ficus carica</i> , pip, NC	1	
<i>Ficus carica</i> / <i>Fragaria vesca</i> L., pip, NC	6	
<i>Malus</i> sp., seed, NC		6
<i>Malus</i> / <i>Pyrus</i> sp., seed (fragment), NC	6	5
<i>Prunus avium</i> L. group, fruitstone, NC	6	4
<i>Prunus domestica</i> L., fruitstone, NC	13	
<i>Sambucus nigra</i> L., pip, NC	16	
<i>Vitis vinifera</i> L., pip, NC	1391	23
Others:		
<i>Apiaceae</i> , mericarp, NC		3
<i>Atriplex patula</i> L. / <i>A. prostrata</i> Boucher, seed, NC	2	
<i>Chenopodium album</i> L., seed, NC	1	
cf. <i>Fallopia convolvulus</i> (L.) A.Löve, nutlet, NC	1	
<i>Lathyrus</i> / <i>Vicia</i> sp., seed, NC		2
cf. <i>Rumex</i> sp., nutlet, NC		1
<i>Sambucus ebulus</i> L., pip, NC	1	
<i>Sambucus</i> sp., pip (fragment), NC	17	
cf. <i>Solanum dulcamara</i> L., seed, NC		1
<i>Stellaria media</i> (L.) Vill., seed, NC	1	
Indeterminable	42	43
Total	1957	1393

C – carbonized plant remains, NC – non-carbonized plant remains

shoes) and accessories (e.g. flower-shaped bowl), one can conclude that a distinguished woman was buried in this

grave, a member of the upper class of the Andautonia urban community. The unusually large dimensions of grave 1 from Šćitarjevo can be explained by the large quantity of accessories deposited in it, which actually shows that this grave form was influenced by the distinguished social status of the deceased woman. The character of the items found in the grave indicate the Roman way of life, so one can assume that a woman was buried in the grave who was perhaps a member of an older, well-established family that retained its political and economic power even after the Roman occupation, albeit a family that accepted the new way of life brought by the Romans. However, by the same token it may be the grave of a wealthy newcomer who wished to demonstrate her high status in a new area by organising interment in a wooden coffin with many accessories. During research, samples for archeobotanical analysis were taken from this grave.

Materials and Methods

Contents of the two ceramic vessels and part of the filling around the pots in Ilok and samples from different parts of the grave in Šćitarjevo were taken for archaeobotanical analysis. Samples for archaeobotanical analysis were collected and processed in the field by archaeologists. Each sample was floated over the sieves, with mesh diameters 0,5 and 1 mm and two fractions of each sample were obtained. Seeds, fruits and other plant remains were picked out and sorted using a binocular microscope with 10× magnification and afterwards identified using 10–40× magnification. The plant remains were identified with the aid of a reference collection comprising recent plant material, and by reference to relevant literature^{7–9}.

Results

In this paper, 1957 plant macrofossils from samples collected in a grave in Ilok and 1393 plant macrofossils from samples from a grave in Šćitarjevo were subjected to archaeobotanical analysis, and a total of 30 taxa were determined (Table 1), mainly down to the level of species. Alongside each taxon is a symbol defining the type of macrofossil: C – carbonised, and NC – non-carbonised and mineralised. Some taxa are accompanied by the mark cf. (Lat. *conformis*), indicating taxa that were unable to be determined with high degree of certainty. In most cases it is cultivated plants that are concerned, and the taxa determined in Table 1 are arranged into sets according to^{9–11}. Also mentioned are potential useful and ritual plants, and individual species that might be habitat indicators. A comparative analysis of the species determined provided an insight into the hitherto little known burial customs of the 1st/early 2nd century AD in the Early Roman necropolises in northern and eastern Croatia, as well as a partial reconstruction of the agriculture in the environments of the then Roman settlements, and the prevailing trade routes.

Some critical identifications

Most of the plant remains are non-carbonised and mineralised (calcified, during the influence of highly calcareous ground water), as a result of which they have lost their fine surface structures. For this reason some of the findings were not susceptible to precise determination. This primarily refers to the *Prunus avium* group (Table 1), which includes *Prunus avium* (sweet cherry), *P. cerasus* (morello cherry) and *P. spinosa* (blackthorn), taxa which is normally possible to distinguish on their stone morphology^{9,12}. A similar uncertainty arises with the taxon *Cucumis melo*/*C. sativus* (Table 1). Seeds of melon (*C. melo*) and cucumber (*C. sativus*) can be distinguished from the fine surface structure¹³. As a result of mineralization, this fine surface structure has disappeared and so it is impossible to tell these two species apart.

Discussion

Ilok (Cuccium)

The following cereals were found in the Ilok grave: barley (*Hordeum vulgare*), millet (*Panicum miliaceum*), four kinds of wheat (*Triticum monococcum*, *T. dicoccon*, *T. aestivum* and *Triticum cf. spelta*), and large quantities of fragmented remains of cereals (*Cerealia*). As for legumes in the grave goods, lentil (*Lens culinaris*) and bitter vetch (*Vicia ervilia*) were found in the grave goods. Because of the position of Ilok, which is favourable for agriculture, it is likely that the legumes and cereals found were grown in the surrounds of the settlement, but they could always have been trade goods.

Since certain imported goods indicate the rapid acceptance of Romanisation by the indigenous pre-Roman population, this progress would probably have been manifested in agriculture, particularly in fruit growing and viticulture. For this reason cultivated plants such as *Malus/Pyrus* sp. (apple/pear), *Prunus avium/cerasus* (sweet/Morello cherry), *P. domestica* (plum) and *Vitis vinifera* (grape vine) (Figure 4) were also probably grown, although it is possible that they arrived in the Ilok area via trade. Here, of course, one does not exclude the other, i.e., it is possible that these crops were at one and the same time locally grown and imported via trade. In ancient historical sources (Dion Cassius 49.36.2, Strabon VII.5.10) it is recorded that in Pannonia wine was produced in small quantities, and that it was of poor quality, and so for the colonising Roman population and the local aristocracy, wine was imported, as shown by finds of amphorae in which it was transported, dated as early as the beginning of the 1st century AD. The cultivation of the vine in southern Pannonia was documented throughout the second half of the 3rd century, at the time of Emperor Probus who gave a command to the soldiers to plant selected varieties of vines on the slopes of Fruška Gora (*Almus Mons*)^{6,14}.

The fig (*Ficus carica*) and the olive (*Olea europaea*) are among the oldest Mediterranean crops, and they were imported into the continental area into the Danube

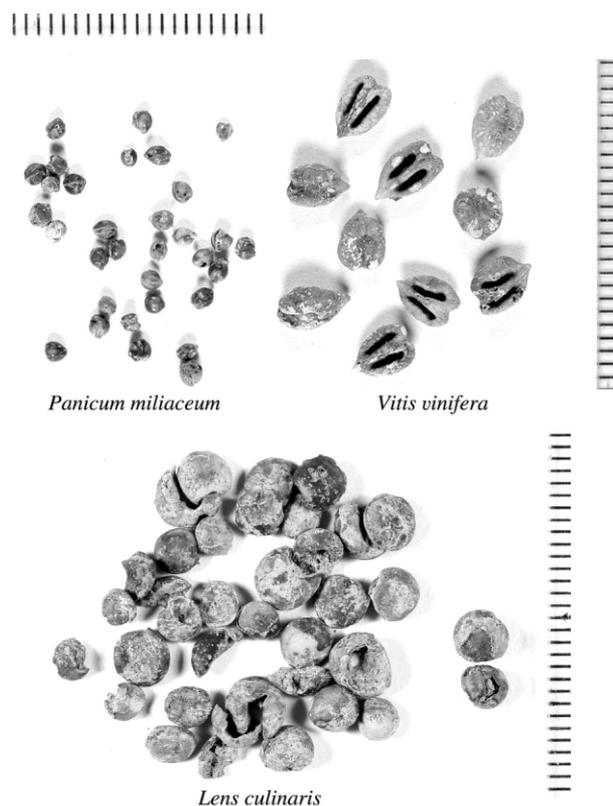


Fig. 4. Some of the most numerous non-carbonized plant remains found in Roman graves: *Panicum miliaceum* and *Lens culinaris* from Šćitarjevo and *Vitis vinifera* from Ilok.

limes. The fig was not only a favourite fruit, but, dried, was used as a sweetener. The olive is the most prominent and economically probably the most important classical crop in the Mediterranean. The olive and the fig will undoubtedly constitute evidence of Romanisation of the local population, and since they were a valued and important item of trade were often found as grave goods^{15–17}.

The melon (*C. melo*) and cucumber (*C. sativus*) are cultivated plants that were grown in the surrounds of Ilok or imported via trade. The continental conditions in the area of Ilok are more suitable for the cultivation of the cucumber than of the melon, and the cucumbers could have been grown locally, although it is impossible to rule out the possibility of their having been pickled and imported through trade. As for the melon, it is also possible, that unripe melons were transported from the Mediterranean region and/or that they were grown on the warmer exposures in the surrounds of the settlements¹⁸.

The common elder (*Sambucus nigra*) is widespread bush or tree, and there is a long tradition of the use of almost all parts of the plant for medicinal or dietary purposes^{19–20}. Elder trees are also linked with the cult of the dead. Thus the Celts believed that the god Pusch-kaitis dwelled in the ground below the elder, and that he ruled human destinies, among other things following

people into the world of the dead. According to Greek tradition, the elder tree was required for a funeral, while a similar tradition was long retained in northern Germany, where a carpenter would take the measurements for the coffin of the departed with a freshly cut elder branch²¹. It is possible that some of these beliefs are the reason why the fruits of the elder were a component of the grave goods of the Ilok grave.

All the kinds of cereal grains and the bitter vetch (*Vicia ervilia*) in the Ilok grave were carbonised, while the other plant finds were non-carbonised, that is that they arrived in the grave in fresh, dried or as prepared foodstuffs. Since this is a necropolis and a complex and still not entirely elucidated funeral ritual, it can be hypothesised that the grains and the bitter vetch were placed on the pyre with the deceased or were thrown into the flames during the cremation, and then, together with the remains of the deceased, were collected and separately interred in the receptacles that were put into the grave. Research into cremation burials in Greece from the 1st millennium BC show that wheat was used for the baking of bread that was ritually placed on the deceased's funeral pyre or offered to the gods in their shrines²². Ritual burning of a piece of bread is also recorded in Roman necropolises¹⁶, which might perhaps at least partially explain the incinerated remains of cereals from the Ilok grave, particularly the relatively large quantity of fragmented remains of grains.

Lentil and fruits that have been preserved in non-carbonised form were probably put into the grave, fresh, dried or as prepared/cooked foodstuffs, while the remains of the deceased and the other contributions were placed in the grave or later. This plant remains could have been deposited as food for the deceased (belief in an immortal soul), as remains of the funerary feast, or as a sacrifice to the gods²³. As well as the fig, which probably in order to have been transported from the Mediterranean area was probably dried, most of the other fruit could have been included in fresh form. The fruits of apple, pear, plum, elder, grape vine and melon ripen more or less at the same time, i.e., in late summer, early autumn, and it is possible that the burial was at that season. Nevertheless, one should not ignore the fact that all the fruit remains of the grave goods could have been preserved a relatively long time in dried or in some cooked state. Described group of carbonised and non-carbonised plant remains represent conceptual data, according to Kreuz²³ as they were most probably added to the cremation intentionally.

Several weed and ruderal plants also found their way into the Ilok grave, showing a certain degree of human influence on the environment of the settlement. *Atriplex patula*, *Chenopodium album* and *Stellaria media* are species that come in the framework of today's order *Chenopodieta* and indicate nitrophilous weed and ruderal plant-communities^{8,24}. The remains of these weed-ruderal species might have got into the grave as accidental admixtures of the plant contributions. However, the necropolises are also anthropogenic habitats on which the said species might well have developed, and so it is

possible that the plant remains arrived into the grave unintentionally during the actual act of interment.

Sambucus ebulus comes in various nitrophilous communities of the ruderal vegetation of today's order *Artemisietea vulgaris*^{24–25}. From the fruits of it, the blue dye is obtained that can be used for dyeing skin and fibres^{19–20} and it is possible that the plants were used in this way. But the plant has an unpleasant smell and relatively toxic fruits, and because of the locality and habitat (a necropolis quite close to the settlement) and its minimum representation in the samples (Table 1), it is more likely that it grew somewhere in the vicinity and accidentally got into the grave casket while the deceased was being interred.

Šćitarjevo (*Andautonia*)

A very similar variety of grave goods including cereals, legumes and fruit remains can be found in the Roman grave from Šćitarjevo.

By way of cereals, the samples contained only non-carbonized millet (*Panicum miliaceum*) (Figure 4), in very large quantities, as compared to all other taxa. Millet was probably cultivated in the vicinity of Andautonia, however, it is surprising that there are no contributions of other cereals. Since it is clear that an appreciated and wealthy female was buried in the grave, it could have been expected that the »finer« kinds of cereal would have been contributed as well. Millet is an old crop, which was cultivated in southern Pannonia even before the arrival of the Romans. As compared to the other cereals such as wheat, barley or rye, it is of lower quality, but then is less demanding in terms of cultivation and has a shorter growing season. Millet was recorded in the Early Roman grave in Ilok, together with the other kinds of cereal, but not in the Roman graves in northern Italy^{15,26}. It is possible that cereals were placed on the pyre with the deceased, and were then in a carbonized state collected with the other remains and then placed in the grave, but, because of their relatively small specific gravity, were floated off during flood time. It is also possible that millet belongs to the traditionally highly-appreciated elements of the agriculture of the earlier inhabitants (although the Romans cultivated it too), and as such was put into the graves of the indigenous population. It is also possible that the deceased in the Šćitarjevo grave was interred in a year in which the harvests of the other cereals were poor. Millet is a less demanding summer crop, and hence in this season it might have been the main grain in the diet. Wheat, barley and rye were predominately taking for bread baking, whereas millet, because of low content of proteins, was typical crop for porridge and similar dishes¹⁰. As millet was found together with legumes (lentil), perhaps they were mixed together. Therefore the protein content of the flour was greater and maybe it was possible to bake bread from millet-lentil mixture.

The lentil (*Lens culinaris*) (Figure 4) is an old crop that was probably cultivated in the environs of Andautonia, perhaps as mixed crop with millet, and was put into the grave as part of the grave goods of the deceased.

The lentil, together with the broad bean (*Vicia faba*) was considered food for the departed in the Roman cults²².

The falseflax (*Camelina sativa*) is also a plant that has a short growing period, is undemanding as far as soil is concerned and is not susceptible to winter frosts, and was once cultivated above all for its oil. The oil is not of a particularly high quality, and it was often used for lamps²⁷. It is possible that the few seeds found were mixed in with the oil of the oil lamps.

Judging from the finds of the grave of the deceased woman in Šćitarjevo, along with the acquisitions of Romanisation in the material culture, the advanced agriculture was also undoubtedly accepted early on. Hence, as in the Ilok area, the apple/pear (*Malus/Pyrus* sp.) and the grapevine (*Vitis vinifera*) were probably cultivated in the vicinity of Andautonia, although they could have been items derived from trade.

All parts of *Solanum dulcamara* are more or less toxic, although they were used in folk medicine^{28–29}. It can hardly be imagined that the very toxic fruits were deliberately placed there as part of the grave goods. This species is found in damp habitats such as those alongside the Sava River, where Andautonia is located, and it could perhaps have got into the grave by accident during the funeral ceremony or during a flood.

Comparison

These two Early Roman graves, from Ilok and Šćitarjevo, are richly furnished and show that the deceased belonged to the upper urban classes. Similar rich interments of members of the indigenous aristocracy during the 1st/2nd centuries AD are also known from the region of the Hungarian Trans-Danube area³⁰. In the Ilok grave, a little older, there are strong indigenous elements, though with elements of advanced Romanisation which are nevertheless dominant, particularly evident in the Šćitarjevo finds. Because of the forms of the imported objects, or imitations of them, it can be concluded that the early Romanisation of southern Pannonia of the end of the 1st century BC and during the 1st century AD was disseminated most of all from the northern Italic space, whence, perhaps, some of the funerary rituals also came, including putting in plant remains as part of the grave goods of the departed.

Grave goods of various species of fruit, like those from the graves in Ilok and Šćitarjevo, are documented in other Roman necropolises. The inclusion of plant remains is recorded in the cinerary graves in the eastern necropolis of Poetovia in which in two graves the calcified remains of dates (*Phoenix dactylifera*) were found, together with figs and apples, while the vessels included are assumed to have contained wine and beer³¹. In the Roman necropolis of Emona, too, in one grave the burned remains of dates were found³². Finds of apple seeds

have been found in the hand of a departed in the Roman necropolis at Beška in Syrmium³³. At the Roman necropolis of Nave¹⁵ and to a less extent of Mariano Comense²⁶, in northern Italy grave goods in the form of plant remains, similar in substance to that of the graves in Ilok and Šćitarjevo have been recorded. Also at the necropolises, the remains of grains, legumes and fruits like apples and pears, grapes, figs, olives, dates, walnuts (*Juglans regia*) and hazelnuts (*Corylus avellana*) have been found. In the Roman cults wheat and barley were often given as sacrificial gifts, together with broad bean and lentils, which were considered food for the dead²². It is interesting that in grave 1 from the necropolis alongside the Roman castellum in Wetterau, only rye (*Secale cereale*) was found and no imported fruit at all. In 1st millennium BC cinerary graves in Greece, the remains of grapes and figs are most often found, and after that come olives, pomegranates (*Punica granatum*), garlic (*Allium sativum*) and other less numerous plant species²².

The reasons for the generous gifts to the deceased, particularly those of greater wealth of various kinds of cereals and fruits should be sought in the complex rules of the burial customs that are still not very well known in the area of southern Pannonia in the Early Roman period. Similar finds of plant remains in the Roman necropolises of Emona and Poetovia, and in those in northern Italy, might perhaps indicate that a new and hitherto unknown ritual burial, which included the placing of plant remains as grave goods for the departed for the afterlife, arrived in this area together with the imported items and foodstuffs that came as new acquisitions into southern Pannonia. That it was very likely an imported part of the Romanisation of burial ritual is indicated by the absence of plant remains in the late La Tène graves of the Scordisci and Taurisci dated to the 1st century BC, in which animal bones dominated in contributions of food⁶.

In addition to cereals, which were the most frequent plant grave goods in the Roman graves, it is common to find accompanying weed plants and/or typical representatives of ruderal vegetation of spaces such as necropolises¹⁶.

Acknowledgements

The laboratory work on Ilok and Šćitarjevo samples was done at the Institute of Geobotany, University of Hanover, Germany. We would like to express our thanks to Professor Hansjörg Küster for help in identifications of plant remains, for support and fruitful discussions. We are grateful to German Academic Exchange Service (DAAD), Bonn, Germany for scholarship and financial support, to Sven Jelaska for making the geographical map of localities investigated and to Damir Doračić for making the photographs of plant remains.

REFERENCES

1. JOVANOVIĆ, A.: Romanization and ethnic elements in burial practice in the southern part of Pannonia Inferior and Moesia Superior. In: PEARCE, J., M. MILLET, M. STRUCK (Eds.): Burial, Society and Context in the Roman World. (Oxbow Books, Oxford, 2000). — 2. POLFER, M.: Reconstructing funerary rituals: the evidence of *ustrina* and related archaeological structures. In: PEARCE, J., M. MILLET, M. STRUCK (Eds.): Burial, Society and Context in the Roman World. (Oxbow Books, Oxford, 2000). — 3. TOPÁL, J.: The connection between funerary rites and ethnic groups in the cemeteries of north-eastern Pannonia. In: PEARCE, J., M. MILLET, M. STRUCK (Eds.): Burial, Society and Context in the Roman World. (Oxbow Books, Oxford, 2000). — 4. TOYNEBEE, J. M. C.: Death and burial in the Roman world. (Baltimore-London, 1971). — 5. STRUCK, M.: High status burials in Roman Britain (first – third century AD) – potential interpretation. In: PEARCE, J., M. MILLET, M. STRUCK (Eds.): Burial, Society and Context in the Roman World. (Oxbow Books, Oxford, 2000). — 6. DIZDAR, M., R. ŠOŠTARIĆ, K. JELINČIĆ, Prilozi Instituta za arheologiju, 20 (2003) 57. — 7. BEIJERINCK, W.: Zadenatlas der nederlandsche flora. Ten behoeve van de botanie, palaeontologie, bodemcultuur en warenkennis. (Backhuys & Meesters, Amsterdam, 1947). — 8. HANF, M.: Acherunkräuter Europas mit ihren Keimlingen und Samen. (BLV Verlagsgesellschaft GmbH, München, 1999). — 9. RENFREW, J. M.: Palaeoethnobotany, The prehistoric food plants of the Near East and Europe. (Methuen & Co Ltd, London, 1973). — 10. KÖRBER-GROHNE, U.: Nutzpflanzen in Deutschland, Kulturgeschichte und Biologie. (Konrad Theiss Verlag, Stuttgart, 1987). — 11. ZOHARY, D., M. HOPF: Domestication of Plants in the Old World, The origin and spread of cultivated plants in West Asia, Europe, and the Nile Valley. (Clarendon Press, Oxford, 1988). — 12. KROLL, H., Ber. Deutsch. Bot. Ges., 91 (1978) 181. — 13. KÜSTER, H., Vortr. Niederbay. Archäologentag A, 6 (1988) 175. — 14. ZANINOVIĆ, M., God. Cen. Bal. Isp., 13 (1976) 261. — 15. ROTTOLI, M.: Resti vegetali e alimentari. In: PASSI L. (Ed.): Sub ascia. Una necropoli romana a Nave. (Edizioni Panini, Modena, 1987). — 16. BLÄNKLE, P. H., A. KREUZ, V. RUPP, Germania, 73 (1995) 104. — 17. ŠERCELJ, A., Arheološki vestnik, 41 (1990) 309. — 18. ZEIST, W. VAN: Economic aspects. In: VAN ZEIST, W., K. WASYLIKOWA, K.-E. BEHRE (Eds.): Progress in Old World Palaeoethnobotany. (Balkema, Rotterdam, 1991). — 19. HEGI, G.: Illustrierte Flora von Mittel-Europa VI/1 – *Sambucus*. (München, 1918). — 20. KÖNIG, M., Funde und Ausgrabung im Bezirk Trier, 25 (1993) 3. — 21. LAUDERT, D.: Mythos Baum. (BLV Verlagsgesellschaft GmbH, München 2003). — 22. MEGALOU, F.: Funeral plant offerings from Greek historical sites: a preliminary study. (Plzen, 2004) — 23. KREUZ, A.: Functional and conceptual archaeobotanical data from Roman cremations. In: PEARCE, J., M. MILLET, M. STRUCK (Eds.): Burial, Society and Context in the Roman World. (Oxbow Books, Oxford, 2000). — 24. OBERDORFER, E.: Süddeutsche Pflanzengesellschaften: Wirtschaftswiesen und Unkrautgesellschaften. (Gustav Fischer Verlag, Jena, 1993). — 25. HORVAT, I., V. GLAVAC, H. ELLENBERG: Vegetation Südosteuropas. (Gustav Fischer Verlag, Stuttgart, 1974). — 26. CASTIGLIONI, E., M. COTTINI, M. ROTTOLI, Mariano, Via T. Grossi: analisi archeobotaniche. (Società Archeologica Comense, Mariano Comense, 1999). — 27. BOUBY, L., Antiquity 72 (1998) 391. — 28. HEGI, G.: Illustrierte Flora von Mittel-Europa V/4 – *Solanum*. (München, 1927). — 29. KUŠAN, F.: Ljekovito i drugo korisno bilje. (Poljoprivredni nakladni zavod, Zagreb, 1956) — 30. MRÁV, Z., British Archaeological Reports IS, 1312 (2004) 1. — 31. KUJUNDŽIĆ, Z.: Poetovijske nekropole. (Narodni muzej u Ljubljani, Ljubljana, 1982). — 32. PETRU, S.: Emonske nekropole. (Narodni muzej u Ljubljani, Ljubljana, 1972). — 33. MARIJANSKI-MANOJLOVIĆ, M.: Rimska nekropola kod Beške u Sremu. (Vojvodanski muzej, Novi Sad, 1987).

R. Šoštarić

Department of Botany, Faculty of Science, University of Zagreb, Marulićev trg 20/2, 10000 Zagreb, Croatia
e-mail: renata@botanic.hr

KOMPARATIVNA ANALIZA BILJNIH NALAZA IZ RANORIMSKIH GROBOVA U ILOKU (*CUCCIUM*) I ŠČITARJEVU (*ANDAUTONIA*), HRVATSKA – PRILOG POZNAVANJU POGREBNIH RITUALA U JUŽNOJ PANONIJI

SAŽETAK

Usporedna arheobotanička analiza biljnih ostataka iz ranorimskih paljevinskih grobova u Iloku i Ščitarjevu dokumentira postojanje složenog rituala pokapanja pokojnika, no istovremeno omogućava i bolje poznavanje agrikulture i trgovine u 1./početak 2. st. posl. Kr. u južnoj Panoniji. Najveći dio pronađenih žitarica (*Hordeum vulgare*, *Panicum miliaceum*, *Triticum monococcum*, *T. dicoccon*, *T. aestivum* i *T. cf. spelta*), mahunarki (*Lens culinaris*, *Vicia ervilia*) i »voćnih« priloga (*Cucumis melo/sativus*, *Ficus carica*, *Malus/Pyrus* sp., *Prunus avium* grupa, *P. domestica*, *Sambucus nigra* i *Vitis vinifera*) vjerojatno je uzgajan u okolici istraživanih lokaliteta, no mogao je istovremeno biti i predmetom trgovine koja je nesumnjivo bila dobro razvijena, što pokazuju nalazi smokve (*Ficus carica*) i masline (*Olea europaea*) – tipičnih mediteranskih kultura. Sve vrste u iločkom grobu pronađenih žitarica i lečasta grahorica (*Vicia ervilia*) su karbonizirane, što znači da su bile spaljene i vjerojatno su bile položene s pokojnikom na lomaču. Leća (*Lens culinaris*) i ostali »voćni« nalazi su nekarbonizirani i mineralizirani, odnosno u grob su stavljeni svježi, osušeni ili kulinarski prerađeni, kao hrana za pokojnika (vjerovanje u besmrtnu dušu), kao ostatak ceremonije pokapanja, ili kao žrtva bogovima.