

The use of plants in ritual context during Antiquity in Bulgaria: overview of the archaeobotanical evidence

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ABSTRACT

Botanical remains from sanctuaries and necropolises provide valuable information about ancient religious practices. The current paper discusses old and new archaeobotanical data from Bulgaria and the use of plants in ritual context from Antiquity. The time span of the 44 considered sites (sanctuaries and necropolises) is between the 6th century BC and the 3rd century AD. Most of the sanctuaries in Bulgaria, where archaeobotanical remains have been studied, date to the Bronze and Iron Ages, and a large proportion represents the so called “pit fields”. Information concerning later periods is almost completely lacking. Some evidence on plant offerings is available from the necropolises of the Hellenistic and Roman periods. Although the archaeobotanical data from these sites are quite scarce, their increasing number allows the observation of some common tendencies. Cereals and pulses are most commonly identified at sanctuaries, while fruits are typical remains in the necropolises. Very often imported species (like stone pine, pistachio and olive) are found which testifies to existing contacts with adjacent regions (mainly the Mediterranean area and North Africa).

KEYWORDS

Hellenistic and Roman period, Bulgaria, archaeobotanical remains, sanctuaries, necropolises

Introduction

Archaeobotanical research is of great significance for our understanding of ancient cultural, economic and technological change. Plant remains may be found at almost every archaeological site and their study expands the archaeological data and contributes to the interpretation of the archaeological structures. Archaeobotany provides information about aspects of everyday life in the past such as agricultural practices, land use, trade connections including plant food and products, as well as the use of plants in rituals.

The current paper attempts to summarize the available archaeobotanical data from Bulgaria deriving from ritual contexts (sanctuaries and necropolises) spanning between the 6th century BC and the 3rd century AD. The plant remains from these sites facilitate the study of what role plants and their products have played in rituals, thus complementing the archaeological data, which in turn helps better understanding and interpreting of ancient cults and religious practices.

Archaeobotanical evidence from sanctuaries in Bulgaria, dating to the periods under consideration, is quite scarce. Botanical analysis has been conducted mainly at the so called “pit fields” (for a most recent review see Hristova et al. in press). These structures existed from the end of the 2nd and through the whole 1st millennium BC, being most common between the 6th and the 3rd century BC (Георгиева 1991, 1). The Iron Age pit-field sites con-



Fig. 1. Map of the studied sanctuaries (after Иванов 2008, 8 with additions by the author)
 Обр. 1. Карта на проучваните светилища (по Иванов 2008, 8 с изменения и допълнения от автора)

sist of differently shaped pits and sometimes ditches. The fill of many of these pits contains charcoal and ash layers including a variety of charred plant remains. The presence of finds like whole vessels, luxury objects and in some cases numerous animal and human remains inspired some scientists to associate the pits with rituals (Георгиева 1991; Tonkova, Savatinov 2001). However, the pit fill assemblages may also, or instead, represent refuse deposits (Попов 2007). Although the interpretation of the “pit fields” in terms of having a cultic function is still questioned in some cases (Попов 2007), I decided to include in the current paper the evidence on Late Iron Age „pit fields” considered by their excavator as pit sanctuaries. Here, eleven pit-sanctuaries are discussed, as well as one ritual surface structure – *eschara* from the site of Kabyle, sector V (Гетов *et al.* 2012, 362-365), all situated in the southern part of the country (fig. 1); two of these sites are unpublished and ten were published (table 1).

The archaeobotanical data from burial contexts from Antiquity (Славова 2012 and the cited literature) are relatively abundant (about 30 sites were analysed – fig. 2). Most of the analysed plant remains come from cremations and were probably burnt together with the deceased. Botanical material in inhumations was also recorded and is usually composed of wood remains, most likely representing parts of the burial construction.

Materials and methods

The archaeobotanical material discussed in this paper consists mainly of charred remains (from Klabye, Skobeleva, Krepost, Karnobat, *etc.*) and small amounts of mineralized



Fig. 2. Map of the studied burial contexts (after Иванов 2002, 12 with additions by the author)
 Обр. 2. Карта на проучваните погребални контексти (по Иванов 2002, 12 с изменения и допълнения от автора)

and subfossil remains (from Messambria and Dolno Izvorovo) usually seeds, fruit, wood, etc. deriving from ritual contexts (burials and sanctuaries). The charring of plants occurs in the course of various activities when the organic matter comes in contact with fire and under anoxic conditions. During this process the plant material is transformed to almost pure carbon. The preservation of plant remains through charring is selective and depends mainly on the temperature and the plant structure. Usually, thick plant structures are preserved (Jacomet, Kreuz 1999). Mineralized remains are extremely rare in the studied samples. Mineralization of plant parts occurs when the organic matter comes into contact with minerals, primarily nitrates or phosphates. The high content of nitrates and phosphates is usually related to faecal material and, therefore, mineralized remains are commonly found in latrine, cesspits, middens, sewerage systems, etc. (Green 1979). Mineralization is also possible through the contact of plants with metals, like bronze and iron. Subfossil remains preserved by desiccation are common for arid environments like deserts, but may also occur in completely dry conditions like tombs and cists (Jacomet 2007, 2388-2389). Such examples are the necropolises of Messabria and Dolno Izvorovo.

The botanical remains are extracted from the sediment by flotation, dry sieving or picked directly from the studied archaeological structures. Following the collection of the material, its identification was carried out under a stereo-microscope with low magnification (up to 30x or 40x). For wood identification, a microscope with reflected light was used (with magnifications of 50x, 100x, and 200x). The determination of the remains was based on their morphological and anatomical characteristics. The results of the author's analysis,

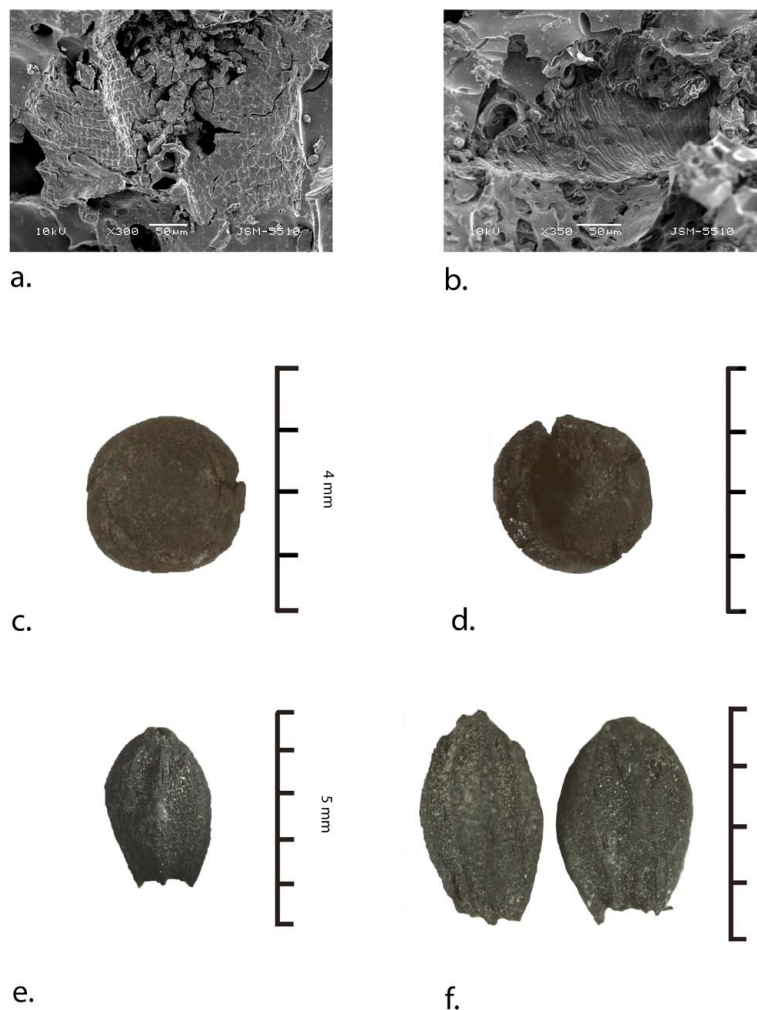


Fig. 3. Macro-remains found in sanctuaries: a, b - Microscopic view of the surface of the food remain (bread/gruel) from the site Krepost; c, d - madder (*Rubia tinctorum*); e, f - bur-reed (*Sparganium* sp.)(Photos by I. Hristova)

Обр. 3. Макроостанки намерени в светилища: а, b – микроскопски изглед на повърхността на хранителна останка (хляб/каша) от обект Крепост; c, d – бояджийски бош (*Rubia tinctorum*); e, f – ежова главичка (*Sparganium* sp.) (снимки И. Христова)

together with the previously published studies, are presented in tables 1, 2, and 3. For the previously analysed sites only the presence/ absence of plant taxa is considered. The ubiquity of each plant taxon was calculated as the percentage of the sites at which the taxon occurs out of the total number of studied sites.

Results and Discussion

Sanctuaries

The plant remains discovered at sanctuaries show a great taxonomic diversity; however, the most common finds are cereal crops (table 1). Among these, wheat and barley are predominant, followed by millet. Hulled wheats, although very frequent at the sites, were found in small amounts in the ritual contexts. An exception is the site of Gledachevo, where einkorn was the dominant taxon (Tonkova, Savatinov 2001). Leguminous crops (like pea, lentil and bitter vetch) and fruits (such as grape, cherry, walnut and fig) are also typical

finds but usually represented by only few remains. A good example is the site of Krepost where pulses represent 2% and fruits just 1% of the registered botanical remains. Other finds of interest are those of bread/ gruel/fruit flesh discovered at Krepost and Kabyle (fig. 3a, b), which may be considered as both offerings and residues from ritual meals. In the Roman ditch at the site of Krepost a find of the dye plant madder (*Rubia tinctorum* – fig. 3 c, d) was recorded. Madder roots can be over a metre long and 12 mm thick and were used as a source of red dye. The samples from the *eschara* built on the ground surface in sector V at Kabyle yielded a great amount of seed/fruits of bur-reed (*Sparganium* sp. – fig. 3 e, f) and stems of reed (*Phragmites* sp.). Both are aquatic plants, typical for wetlands, shallow marshes and similar habitats and are thus good indicators for similar environments around the site in the Hellenistic period. *Sparganium* was also known for its use in medical treatments of venomous snake bites (Стоянов, Китанов 1960, 480).

The limited number of archaeobotanically studied sanctuaries from the Late Iron Age, Hellenistic and Roman periods does not offer a basis for a diachronic examination of the evidence. The only site that contains the remains from the two periods of interest (the Hellenistic and the Roman) is Krepost (Ханджийска-Янкулова и др. 2011, 365-366) and it thus provides the opportunity to trace (dis)continuities in the tradition of ritual use of plants in the Pre-Roman and Roman periods. What could be assumed from the results from this site is that, the preferred cereal crop in the Hellenistic times was barley, while in the Roman period it was millet (Table 1). In addition, in contrast to the Hellenistic Age, almost complete absence of pulses in the Roman period can be observed. The reverse situation applies to fruits. The lack of information from other sites dating to these periods renders the above observations tentative and impedes any conclusions on the possible changes in the use of plants through time.

In the majority of the analysed pits the quantity of the botanical remains is very limited. According to Popova (2002, 284), the small quantity of plants implies their use in ritual practices, since the amount of plant food placed with the deceased would have been smaller than that kept in storage structures. On the other hand, the climate in Bulgaria does not allow preservation of uncharred (or non-mineralised) botanical material and this may be another possible reason for minimal and selective preservation of plants.

Cereals are also commonly found in ritual structures in regions adjacent to Bulgaria. Among the useful examples are sanctuaries from the Classical period in Greece where barley and free threshing wheat were predominant, for example: Delphi (Mégaloúdi 2006, 77-80), the sanctuary of Artemis and Apollo in Kalapodi (Kroll 1993) and that of Demeter and Coré at Corinth (Bookidis *et al.* 1999, 17-32). In comparison with the contemporary Bulgarian sites, the difference is the absence of millet – a crop that has never been common in Greece. Further difference is the greater variety of pulses in Greece including lentil, bitter vetch, broad bean and chick pea, of which only few species were recorded in Bulgaria. Contrary to the Bulgarian sanctuary sites, where fruits are quite rare, in Greece they are one of the most common type of remains, especially imported ones or those with significant economic importance (like stone pine, date and chestnut). In some cases fruits were the only botanical finds in the ritual contexts. A good example is the sacrificial context from the 3rd century BC in Messene, Peloponnese where cone and seeds of stone pine, grape, olives, almonds and five whole chestnuts were discovered (Mégaloúdi 2005, 329). Fruits were the predominant plant offerings at most of the sanctuaries in Europe dated to the Hellenistic and Roman periods; for instance, in the temple of the goddesses Isis and Magna Mater in Mainz, Germany, dated to the 1st–4th centuries AD (Zach 2002), the Archaic/Hellenistic

site abbreviation		DB	Kop	MT	Sv	Kum	Dv	17 Vra	Deb	Krast	Bab	Kr	Kr	K	ubiquity %
period		LIA	LIA	LIA	LIA	LIA	LIA	LIA	LIA	LIA	IA	HP	RP	HP	
cereal crops/ conext		pits	pits	pits	pits	pits	pits	pits	sanc.	pits	sanc.	sanc.	sanc.	esch.	
einkorn	<i>Triticum monococcum</i> L.	x	x	x	x	x	x	x	x	x	x	33	32		91
emmer	<i>Triticum dicoccum</i> Shrank.	x			x	x		x			x	3	2		55
free threshing wheat	<i>Tr. aestivum</i> L./ <i>durum</i> L.		x	x	x	x	x	x	x	x	x	3	3	3	91
spelt wheat	<i>Tr. spelta</i> (L.) Thell				x										9
barley	<i>Hordeum vulgare</i> L.	x	x	x	x	x	x	x	x	x	x	61	19		91
millet	<i>Panicum miliaceum</i> L.	x	x	x	x		x				x	17	158		64
rye	<i>Secale cereale</i> L.	x	x	x		x	x				x				55
oat	<i>Avena sativa</i> L.	x	x	x							x				36
leguminous crops															
grass pea	<i>Lathyrus sativus</i> L.	x		x									1		27
lentil	<i>Lens culinaris</i> Medik.	x	x		x	x	x	x		x		3		1	81
pea	<i>Pisum sativum</i> L.	x	x			x						2			36
bitter vetch	<i>Vicia ervilia</i> L.	x	x	x	x	x	x	x			x	6			81
fruits and gathered															
sour cherry	<i>Cerasus vulgaris</i> Miller									x					9
cornel	<i>Cornus mas</i> L.		x			x	x						1		36
fig	<i>Ficus carica</i> L.	x													9
walnut	<i>Juglans regia</i> L.					x			x						18
cherry	<i>Prunus avium</i> L.		x	x		x			x						36
elder	<i>Sambucus</i> sp.	x										1			18
grapevine	<i>Vitis vinifera</i> L.	x	x	x		x	x	x	x				9		73
oil and dye plants															
dragon's head	<i>Lallemantia</i> sp.												1		9
madder	<i>Rubia tinctorum</i> L.												1		9
others															
bread/gruel/ fruit flesh												x	x	x	18
bur-reed	<i>Sparganium</i> sp.													19	9
reed	<i>Phragmites</i> sp. (stems)													12	9

Table 1. Plant taxa (seeds/fruits) from the archaeobotanically studied sanctuaries in Bulgaria (absolute numbers for the sites analysed by the author and presence/absence data for the previously studied sites). Table abbreviations: LIA – Late Iron Age, HP – Hellenistic period, RP – Roman period

Табл. 1. Растителните таксони (семена/плодове) от археоботанично проучените светилища в България (в абсолютни стойности за проучванията на автора и присъствие/отсъствие за данните от други обекти). Съкращения: LIA – късножелязна епоха, HP – елинистически период, RP – римски период

DB=Dana Bunar (Hristova et al. in press), Kop=Koprivlen (Popova 2005b), MT=Malko Tranovo (Тонкова, Божкова 2008), Sv=Svilengrad (Попова 2005а; 2006с; 2008а), Kum=Kumsala (Popova 2001; Tonkova and Savatinov 2001), Dvora=Dvora (Popova 2001; Tonkova and Savatinov 2001), 17 Vra= site 17 Vratitsa (Popova 2005a), Debrashtitsa (Попова 2009), Kr= Krastina (Попова 2009), Babyak (Попова 2008b), Krepost (this paper), Kabyle (this paper)

sanctuary of Demeter and Persephone at Monte Papalucio (Oria, Apulia, Southern Italy) (Ciaraldi 1999, 75-91), a ritual pit in the Roman port of Lattara, France from the first half of the 1st century AD (Rovira, Chabal 2008) and many others. In the examples mentioned above a great variety of fruits were recorded (fig, cones and seeds of stone pine, date, grape, olive, apple, pomegranate, cherry, etc.).

Based on the listed examples it seems plausible that there was a continuity in the plant spectrum used in offerings at sanctuaries of the Hellenistic and Roman periods, not only in Bulgaria but also in other areas.

Plant remains in ritual contexts may be interpreted as offerings, but it is also possible that they are traces of ritual activities involving preparation (and consumption) of meals, in which plant food played an important role (Рабаджиев 2002, 81-84; Bookidis *et al.* 1999, 17-32; Kroll 1993). In most of the examined cases, the repertoire of plants in sanctuaries does not differ significantly from that registered in the settlement contexts. Hence, if the remains do come from a ritual meal, they could indicate that the 'sacred food' was not much different from the typical diet of the population in the period under study (as far as plant food is concerned). If some differences existed, they must be sought in the processes of food preparation, not in the products themselves (Bookidis *et al.* 1999, 29).

Necropolises

Plant remains discovered in necropolises can contribute to the better understanding of funerary rituals. However, very often the information about such finds in Bulgaria is fragmentary and it is restricted to plant remains accidentally observed and collected in the course of excavations; systematic sampling strategy has rarely been applied. Tables 2 and 3 provide the available information on the identified botanical material. The number of archaeobotanically analysed burial sites from the Roman period is larger than the number of similar sites from the Hellenistic period. Interestingly, the range of plant taxa does not differ significantly (table 2) – fruits are predominant in both periods, pulses are present in Roman times and cereal crops in the Hellenistic period.

Seeds and fruits in burial contexts

The most common plant taxon among the studied structures was walnut (*Juglans regia* L.). Its use is typical for the Roman times as demonstrated by its occurrence as 82% of the considered sites, unlike the Hellenistic period where it is found only at 17% of the sites (Table 2, fig. 4a). The tradition of depositing walnuts in graves was attested in most parts of the Roman Empire, (most recent examples of its use include cemeteries in France and Italy – see Bouby, Marinval 2004; Rottoli, Castiglioni 2011). Walnut was considered a symbol of the world and fertility (Теодосиев, Манов 1993, 35), which may explain its wide use in the funerary rituals.

Further typical Hellenistic and Roman grave goods include fruits of date (*Phoenix dactylifera* L.), stone pine (*Pinus pinea* L. – fig. 4b), pistachio (*Pistacia vera* L.) and grape (*Vitis vinifera* L.), (table 2). The archaeobotanical finds of plants that cannot thrive in Bulgaria due to the unfavourable climate (such as stone pine, date palm, and pistachio) are a direct evidence for their import through trade with the Near East and the whole Mediterranean basin. They were more common in the Roman period when the diversity of fruits and, especially, imported plants significantly increased compared to the previous periods; this is clearly visible in the archaeobotanical evidence from the discussed sites (table 2). Exotic and imported taxa were also attested at the necropolis of Apollonia dating to the 4th–2nd centu-

site		B	Ap	M	K,7	Sv	Kr	Ve	G	T	Ch	I	Z	Ka	D	SK	A	K,6,8	K	L	MT	P	MP	Vi	Mar			
name/ period		IV c BC	IV - II c BC	IV - II c BC	IV c BC	HP	end II - I c BC	I c	I c	end I - beg. II c	I - II c	I - III c	II c	II c	II c	II c	II c	II - III c	II - III c	II - III c	II - III c	II - III c	II - III c	II - beg. III c	II c	ubiquity %HP	ubiquity %RP	ubiquity %HP+RP
cereal crops/ funeral ritual		c	c?	c/i	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c	c				
free threshing wheat	Tr. aestivum/durum L.	x	x							?																33	6	13
leguminous crops																												
pea	Pisum sativum L.																	1									6	4
broad bean	Vicia faba L.														x												6	4
fruits and gathered																												
almond	Amygdalus communis L.		x	9							x															33	6	13
cornel	Cornus mas L.				65		1																			33		9
hazelnut	Corylus avellana L.		x	1				x																		33	6	13
fig	Ficus carica L.		x					x																		17	6	9
horse-tail (stalk)	Equisetum sp.												x														6	4
walnut	Juglans regia L.		x					x	x	x	x	x		x	x	x	x	615	x	x	x	x			x	17	82	65
olive	Olea europaea L.																		x								6	4
date	Phoenix dactylifera L.		x					x						x			x		x				x			17	29	26
stone pine	Pinus pinea L.		x			x								x			x	592*	x							33	18	22
pistachio	Pistacia vera L.		x			x		x						x					x				x			33	24	26
cherry	Prunus avium L.		x					x										2								17	12	13
pear	Pyrus communis L.		x		19																					33		9
acorn	Quercus sp.					x?		x																		17	6	9
thyme (stalk)	Thymus sp.												x														6	4
wild vine	Vitis sylvestris Gmel.							x									x										12	9
vine	Vitis vinifera L.	x	x				1	x									x							x		50	18	26
fruit flesh																		1			x						12	9
hemp (fabric)	Cannabis sativa L.												x														6	4
flax (thread)	Linum usitatissimum L.			x																						17		4
bread /gruel							x							x				x								17	12	13

Table 2. The plant taxa (seeds/ fruits) from burial contexts in Bulgaria (absolute numbers for the own studies and presence/absence data for previously studied sites). Table abbreviations: c – cremation, i – inhumation, HP – Hellenistic period, RP – Roman period.

*The recorded remains of *Pinus pinea* include 400 seeds and 192 fragments of cones

Табл. 2. Растителните таксони (семена/плодове) от гробни контексти в България (абсолютни стойности за личните данни и присъствие/отсъствие за данните от други обекти).

B-Bizone (Попова 2009), Ap-Apollonia (Порова 2010), M-Messambria (Славова 2012, *this paper*), K, 7-Kabyle, site №7 (Славова 2011 and *this paper*), Sv-Sveshtary (Попова 2009), Kr-Krepost (*this paper*), V-Vetren (Попова 1986), G-Gledachevo (Порова 2005b), T-Tulovo (Табачкова-Цанова, Гетов 1969), Ch-Chatalka (Буюклиев 1986), I-Izbul (Порова 2005b), Z-Zitosvjat (Попова 2002), Ka-Karnobat (Попова 2005b), D-Dragodan (Теодосиев, Манов 1993), SK-Sveti Kirilovo (Герасимов 1946), A-Abritus (Порова, Маринова 2000), K, 6, 8-Kabyle, sites № 6 and №8 (Славова 2011; *this paper*), K-Kabyle (Славова 2012 и цит. лит.), L-Lublen (Овчаров 1979), MT-Malko Tarnovo (Господинов 1987), P-Popovitsa (Цончев 1954), MP-Malak Preslavets (Попова 2006a), Vi-Vinitza (Попова 2006b), Mar-Marcianopolis (Nenova, Angelov 1999).

ries BC (Popova 2010) and Sveshtary (Попова 2009), but they are absent from other studied sites of the Pre-Roman period. Their occurrence may be explained by the strong Greek influence during Hellenistic times, especially along the Black Sea coast. The above-mentioned plant taxa were also the most common plant offerings in graves from the Roman period across the whole territory of the Roman Empire (Bouby, Marinval 2004; Livarda 2011; Preiss *et al.* 2005; Rottoli, Castiglioni 2011). They potentially reflect the economical and cultural exchange typical for the Romanization processes throughout the Mediterranean.

The presence of imported and exotic plants in necropolises and sanctuaries show their specific ritual meaning. They also indicate prestige and higher social status of the deceased. The correlation between the social status and the plant offerings is indicated at the necropolis of Kabyle dated to the 2nd–3rd centuries AD (sites nos. 6 and 8, situated along the road of the Thracia highway). Here it seems that valuable imported fruits (like stone pine) were associated with graves containing rich archaeological material. The number of stone pine seeds and cone parts in the two graves at site no. 6 is impressive (table 2) and seems to correspond with the representative archaeological artefacts in the burials. Another example are single finds of this imported taxon registered in only two out of the 40 excavated cremations at site no. 8 from the same period (Славова 2011).¹ A similar situation was encountered at the Roman cemetery of Faulquemont, Moselle, North France, where only the ‘wealthy graves’ contained as interments luxury fruits such as dates and olives (Preiss *et al.* 2005).

Other plants attested at the necropolises in Bulgaria are seeds/fruits of: hazel (*Corylus avellana* L.), almond (*Amygdalus communis* L.), fig (*Ficus carica* L.), cherry (*Prunus avium* L.), cornel (*Cornus mas* L.), pear (*Pyrus communis* L.), acorn (*Quercus* sp.), and olive (*Olea europaea* L.) (table 2). The discovery of almonds preseved on the surface of iron strigillas in two graves in the ancient necropolis of Messambria perhaps points to the symbolic meaning of the fruits (fig. 4f). The kernels were arranged perpendicular to the length of the strigillas, which hints at their specific role in the funeral rituals during the Hellenistic period; it also rises a question as to whether almond was cultivated in the study area or if it was imported from the Mediterranean. Almond is one of the first cultivated fruit trees in the Eastern Mediterranean, together with grapevine, date, olive and fig (Zohary *et al.* 2012). It seems that the use of almonds was not a common practice in burials during the Roman period (table 2). The plant offerings of cornel and pear in a burial dated to the 4th century BC near Kabyle, site no. 7 (Славова 2011)² are also remarkable – whole fruits of these trees were put into the pyre (fig. 4c, d, e). They represent a clear evidence of the role of fruits in funeral ritual and testify that not only imported but also local plants served as grave offerings.

Finds of cereal and leguminous crops sporadically occur in the graves in small numbers. A possible explanation for their small quantity may be the methodology of sampling: the visible plant remains are usually collected by hand directly from the cultural layers without (wet or dry) sieving or flotation. This method leads to the recovery of larger and easily visible plant remains and the omission of smaller and/or fragmented plant remains.

Cereals and pulses (wheat, barley, lentil and pea), together with fruits and fragments of gruel/ bread were found at the necropolis of Faulquemont, Moselle, North France (1st – 3rd centuries AD). The whole fruits of date, grape and plum were interpreted as offerings,

1 For more information concerning archaeological findings from sites nos. 6 and 8 see: Лозанов, Христов 2010; and Ханджийска, Янкулов 2010, respectively.

2 For more information concerning site no. 7 in Kabyle see Стоянов и др. 2010

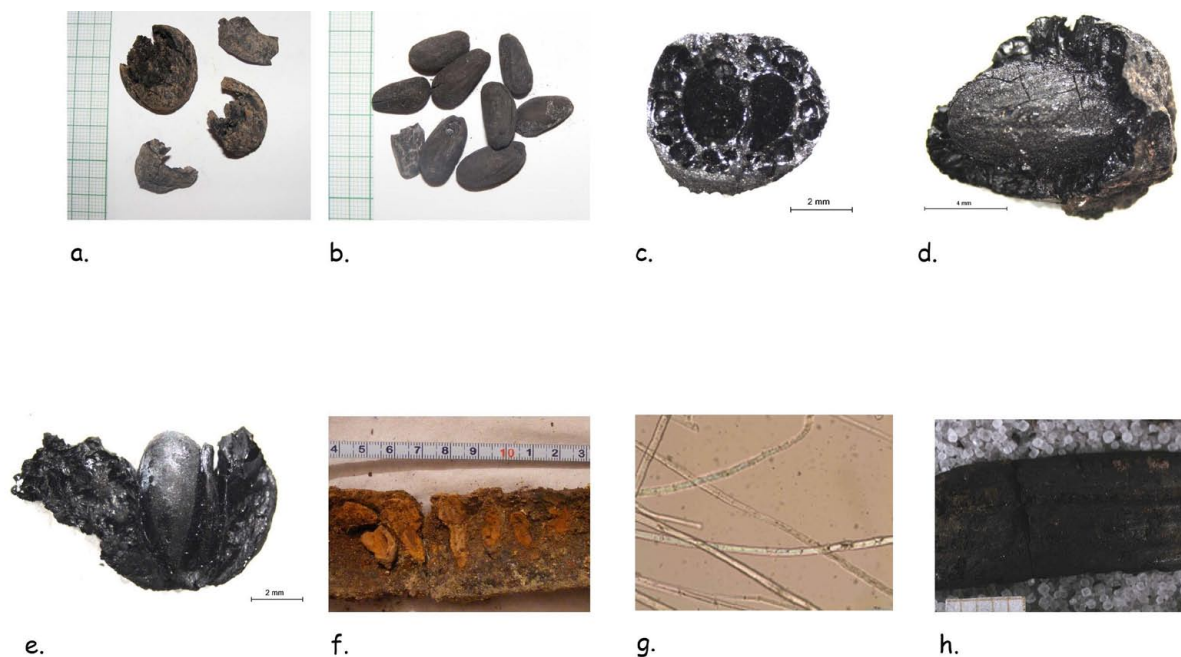


Fig. 4. Macro-remains found in burial contexts: a – Walnut (*Juglans regia* L.); b – Stone pine (*Pinus pinea* L.); c, d – Cornel (*Cornus mas* L.); e – Pear (*Pyrus communis* L.); f – Almond (*Amygdalus communis* L.); g – Flax (*Linum usitatissimum* L.); h – Wooden object (Photos by I. Hristova)

Обр. 4. Макроостанки намерени в погребални контексти: а – орех (*Juglans regia* L.); б – пиния (*Pinus pinea* L.); в, д – дрян (*Cornus mas* L.); е – круша (*Pyrus communis* L.); ф – бадем (*Amygdalus communis* L.); г – лен (*Linum usitatissimum* L.); х – предмет от дърво (снимки И. Христова)

and the highly fragmented hazelnut shells and olive stones were considered part of ritual meals (Preiss *et al.* 2005). Pomegranate, garlic, grape and fragments of bread were recognised in the necropolis of Thasos dated to the 4th century BC (Mégalaoudi *et al.* 2007). Similar range of plant remains were recovered from the Roman cemeteries in Italy (Matterne, Derreumaux 2008, 105-112; Rottoli, Castiglioni 2011, 495-506). These examples, together with the presented archaeobotanical finds from Bulgaria, confirm the validity of Mégalaoudi's (2005) hypothesis that there were no significant differences in the plant food of the dead and the living in this period.

Food offerings

Fragments of gruel/ bread were discovered in some burials from the studied sites (table 2). They are typical finds in funeral contexts not only in Bulgaria, but also in other parts of Europe (Mégalaoudi *et al.* 2007; Preiss *et al.* 2005). This may be explained as a widespread tradition of placing bread in burials, confirmed by the finds of whole loaves of bread in some graves (Hansson, Heiss 2014; Rottoli, Castiglioni 2011, 498). Bread had a major role, not only in everyday life, but also in rituals. For instance, bread is depicted in the central scene of the Kazanlak tomb; furthermore, small bread loaves made of clay were discovered in Sevtopolis (Георгиева 1999а, 74; Рабаджиев 2002, 81-83). It is possible that special ritual loaves were prepared. The presence of bread in graves may be related to the ritual meal, where the deceased was accepted as a participant in the ritual and the food was placed in

the grave (Георгиева 1999b, 235-236).

Textiles made of plant fibres

In addition to the plant remains, finds of textile made of plant fibres are also of interest – for instance, the piece of hemp textile (*Cannabis sativa* L.) from grave № 2 in Diado Minchovata mogila, near Zitosvjat, Karnobat region (Попова 2002, 168) and thread made of twisted flax fibres (*Linum usitatissimum* L.; fig. 4g) from grave 1106 in the ancient necropolis of Messambria. Plant-based textile and thread are not well represented in the archaeobotanical data, although there is some information about their production and use (Георгиева 2000, 156; Писарова 1995, 23; Попова 2002, 168). The limited research and the poor preservation conditions are the likely reasons for a small number of publications dealing with this type of remains.

Comparison of archaeobotanical data with iconographic evidence and written sources

Placing plant offerings in burials was a common practice in the Hellenistic and Roman funerary rituals. This is well attested in the iconography of gravestones from the Roman period (the scene of the symposium) where, usually, a tray of fruits and bread is depicted. Similar images are known from the Hellenistic times as exemplified by the Kazanlak tomb where a depiction of the symposium is visible in the central scene. The table in front of the ruler contains a variety of plant food: fruits (grape and plums), bread, cookies, etc. (Рабаджиев 2002, 81). The choice of food depicted as placed on the table may be related to specific ritual practices, but also taste preferences. The fruit selection in grave structures shows the presence of exotic and imported taxa. It is important to note that imported plants do not occur in all burials. They usually appear in structures that belong to individuals with high social status, as it is apparent from the above-mentioned evidence from Kabyle (Лозанов, Христов 2010; Славова 2011).

Wood remains in burial contexts

The published evidence on wood used in the burials is still very scarce. It is frequently mentioned that wood or wood objects were preserved, but they were not analyzed (Дремсизова-Нелчинова, Балкански 1973, 62; Николов, Буюклиев 1967, 13; Табакова-Цанова, Гетов 1969, 36-37).

Part of the wood found in burials most probably comes from wood objects put in the graves (Deforce, Haneca 2012; Kreuz 2000). Single finds of some taxa likely deriving from wood objects, such as fir from the pyre at site № 7 in Kabyle and juniper from grave 1285 in Messambria). Wooden objects found in graves are usually not made out of wood of rare taxa, as indicated at the sites № 6 (fig. 4h) and № 7 in Kabyle where wooden objects made of plum (*Prunoideae*) and hazel (*Corylus* sp.) respectively were identified. They were determined as objects based on the presence of traces of processing, but they were too fragmented to allow further identification. Further evidence of the presence of wooden objects in burials includes: pine (*Pinus* sp.) remains as part of funeral wreaths from Messambria; spear nozzles made of *Viburnum* and pine fragments attached to a bronze wire from the tomb at Dolno Izvorovo; leg of stool made of coniferous wood and wood joints for the stool made of beech (*Fagus* sp.) from Belitsa (Попова 2008b, 182-183). An interesting find is the preserved coffin from Messambria made of cedar (*Cedrus* sp.). This imported taxon confirms the existence of extensive trade network of this colony and is also pointing at the

site		Br	Be	B	Ap	M	DI	K,7	Me	Sv	Kr	Ch	Bu	S	Z	D	Sk	K	Vi	SS	ubiquity % HP	ubiquity % RP	ubiquity % HP + RP
period		second half V c. BC	first half V c. BC	IV c. BC	IV - II c. BC	IV - II c. BC	end IV c. BC	IV c. BC	IV c. BC	HP	end II - I c. BC	I - II c. AD	mid II c. AD	end I - III c. AD	II c. AD	II c. AD	II c. AD	II - III c. AD	II - beg. III c. AD	end II - beg. III c. AD			
name/ funeral ritual			i	c	c?	c/i	i	c		c	c	c	i	c	c	c	c	c	c	i			
fir	Abies sp.							5													10	0	5
maple	Acer sp.						1	5		x								86			30	11	21
alder	Alnus sp.																	7			0	11	5
hornbeam	Carpinus sp.				x	2		8										71			20	11	16
cedar	Cedrus sp.					x															10	0	5
	Clematis							4													10	0	5
	Coniferous		x			x															20	0	11
cornel tree	Cornus sp.																	222			0	11	5
hazel	Corylus sp.			x	x			16										49			20	11	16
beech	Fagus sp.		x																		10	0	5
beech/ plane	Fagus/ Platanus																	34			0	11	5
alder buckthorn	Frangula alnus Mill.																	7			0	11	5
ash	Fraxinus sp.							1						x				21			10	22	16
walnut	Juglans sp.																	2			0	11	5
juniper	Juniperus sp.					x															10	0	5
pine	Pinus sp.					x	5			x				x				6		x	30	22	26
black pine	Pinus nigra Arn.				x																10	0	5
Macedonian/Bosnian pine	Pinus peuce/heldreichii		x																		10	0	5
	Prunoideae/ Rosaceae						3			x								4			20	11	16
pear/ apple	Pyrus/ Malus																	2			0	11	5
oak	Quercus sp.	x		x	x	59	4	37	x	x	173				x		10	113	x		90	44	68
	Salix/ Populus																	8			0	11	5
European yew	Taxus baccata L.												x								0	11	5
elm	Ulmus sp.				x	3												134			10	11	11
	Viburnum sp.						3														10	0	11
vine	Vitis vinifera L.			x								x			x	x					10	33	21

Table 3. Plant taxa (wood) from burial contexts in Bulgaria (absolute numbers for the sites analyzed by the author and presence/absence data for the previously studied sites). Table abbreviations: c – cremation, i – inhumation, HP – Hellenistic period, RP – Roman period

Табл. 3. Растителните таксони (дървесина) от гробни контексти в България (абсолютни стойности за личните данни и присъствие/отсъствие за данните от други обекти).

Br-Brezovo (Велков 1934), Be-Belitsa (Попова 2008b), B-Bizone (Попова 2009), Ap-Apollonia (Попова 2010), M-Messambria (Славова 2012; this paper), DI-Dolno Izvorovo (Славова 2012; this paper), K, 7-Kabyle, site №7 (Славова 2011; this paper), Me-Mezek (Филов 1937), Sv-Sveshtary (Попова 2009), Kr-Krepost (Славова 2012; this paper), Ch-Chataalka (Буюклиев 1986), Bu-Burgas (Карайотов 1976; Михайлов и др. 1976), S-Sadievo (Попова 2009), Z-Zitosvjat (Попова 2002), D-Dragodan (Теодосиев, Манов 1993), Sk-Skobeleva (Славова 2012; this paper), K, 6, 8-Kabyle, sites № 6 and №8 (Славова 2011; this paper), Vi-Vinitsa (Попова 2006b), SS-Staro selo (Нехризов, Тодорова 2008)

possible higher social status of the deceased. There are several other cases from Bulgaria of preserved burial coffins, e.g. one from Belitsa made of Macedonian/Bosnian pine – *Pinus peuce/heldreichii* (Попова 2008b, 182-183) and one found in Burgas made of European yew – *Taxus baccata* (Михайлов *et al.* 1976). In a cyst-grave from the necropolis of Messambria oak

beams were preserved which may be interpreted as remains of a bench or a coffin.

In the grave I-5 at site № 6 in Kabyle fragments of cork were found. Thanks to the previously recorded cork soles from Tulovo (Табакова-Цанова, Гетов 1969, 36) and Chatalka (Николов, Буюклиев 1967b, 13), it could be inferred that the discovered cork fragments also derive from cork soles.

The presence of some other wood taxa in graves may be explained by their symbolic meaning. For example, vine twigs found at Zitosvjat (Попова 2002, 168), Chatalka (Буюклиев 1986, 14, 20, 69, 80) and Dragodan (Теодосиев, Манов 1993, 31) are connected to the cult of Dionysus. They are understood as a symbol of chthonic and vegetative function of the Thracian Heros, with whom the deceased aristocrats are identified (Теодосиев, Манов 1993, 35).

Anthracological analyses of cremations are still quite rare in Bulgaria. Of the sites considered in this paper, wood was analyzed only from about half of them and usually only the taxonomic diversity was reported.

The most common and abundant are the remains of oak (*Quercus* sp.). They are present in 90% of the Hellenistic sites and in 44% of those of the Roman age (Table 3). Oak forests are the dominant vegetation type in the lowlands and foothills of Bulgaria and the presence of oak wood in the cremations is somewhat expected. The decrease in the number of oak finds in the Roman period may be explained by deforestation and enlargement of open areas for agriculture and pasture, as well as degradation of oak stands in secondary woodlands located close to large settlements, as is the case of Kabyle.

Other frequent taxa in burial contexts are hornbeam (*Carpinus* sp.), hazel (*Corylus* sp.), ash (*Fraxinus* sp.), maple (*Acer* sp.), Prunoideae/Rosaceae, vine (*Vitis vinifera* L.) and pine (*Pinus* sp.). Other taxa, such as elm (*Ulmus* sp.), alder (*Alnus* sp.), alder buckthorn (*Frangula alnus* Mill.), cornel (*Cornus* sp.), and pear/ apple (*Pyrus/ Malus*), also occur in graves, but are not as common (table 3). This great variability of tree taxa most probably reflects diversity of the vegetation surrounding the necropolises. The present state of research does not allow investigations into the regional differences of wood utilization. Most of the examined sites are situated in the south-eastern part of Bulgaria (fig. 1-2). The comparison of the anthracological record of the sites along the sea coast with that from the interior of the country does not reveal any significant differences. However, more detailed information is needed for a more reliable comparison as the analyzed wood assemblages are not sufficiently large (100–300 fragments minimum) to provide a representative basis for the analysis (Asouti, Austin 2005). Nevertheless, some inferences about chronological differences could be made: during the Roman period oak is less common than in the Hellenistic time (90% ubiquity in the Hellenistic times vs. 44% in the Roman Age); maple occurs at 30% of the Hellenistic sites and at just 11% of the Roman ones. The diversity of riverine forests was greater during the Roman period compared to that of the Hellenistic period. For instance, alder and alder buckthorn were absent in the Hellenistic times (table 3). Based on the anthracological data from the necropolis of Kabyle, where more than 40 cremations dated to the 2nd–3rd c. AD. were analysed, it can be assumed that there was no selection of particular wood taxa for this type of funerals. The choice of wood most probably reflects the availability of wood vegetation surrounding the site. Further quantitative analysis of the wood used in funerals are required to test this assumption.

Conclusions

The current overview provides clear evidence that plant offerings were common elements of ritual practices during the Hellenistic and Roman periods in Bulgaria. Fruits were predominant, which is an indicator of the specific role they had, not only in the diet but also in everyday life of past societies. Most of the fruit taxa were cultivated, but those considered gathered from the wild (*e.g.* cornel and elder) were also discovered. Presence of imported taxa testifies to an existing trade network reaching regions like the Mediterranean and the Near East. Many of the plants found in ritual contexts (necropolises and sanctuaries) had an economic importance and at least some of them possessed symbolic meaning. The most typical fruits found in these contexts are: fig, date, grape, olive, cherry, cones and seeds of stone pine, walnut, hazelnut, and almond.

The botanical remains found in sanctuaries in Bulgaria demonstrate a great variety. Cereals and pulses are quite common, whilst fruits are rare occurrences. Plant remains in these contexts may be interpreted as offerings, but they could also reflect storage of food intended for the preparation of ritual meals and other activities in the sanctuaries. In contrast to the sanctuaries, fruit are the most common plant offering at necropolises, while cereals and pulses present only sporadically.

Considering the current state of research on wood used in cremations, it may be concluded that there is no selection of wood for these purposes. For now it is difficult to identify potential chronological and regional differences in the use of wood due to limited data. Generally, it seems that the range of wood taxa used in religious contexts is diverse and probably reflects the composition of the surrounding wood vegetation. Oak is predominant in the assemblages from the Hellenistic times, but its use had decreased in the Roman period and it was replaced by other trees from the now somewhat degraded vegetation. Some wood fragments found in burials probably come from different objects placed in the graves. This is very likely in the case of taxa represented by single items or those whose remains bear traces of manufacturing/use.

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Използване на растенията в ритуален контекст през античността: преглед на археоботаничните данни

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(резюме)

Растителните материали, отложени и съхранени в седименти на светилища и некрополи, спомагат за изясняване и интерпретиране на древните култове и религиозни практики. На територията на България археоботанично изследваните светилища най-общо могат да се датират в бронзовата и желязната епоха. Почти липсват данни за изследвани обекти от такъв характер, отнасящи се до по-късни периоди. Малко повече са данните за некрополи от античността.

Една голяма част от изследваните светилища у нас спадат към т. нар. ямни по-лета. В тези обекти доста често се срещат житните култури. Чести са и останките от грозде. По-рядко се намират други плодни растения като череши, орех, пиния. В съседни на нашата страна райони, като Гърция например, ситуацията е сходна. Много често в светилищата се намират културни житни растения, но за разлика от България, намираните плодове са срещани по-често и по-голямо разнообразие (смокиня, шишарки и семена от пиния, фурма, грозде, маслина, ябълка, нар, череши и др.). За пример могат да се посочат Делфи, светилището на Артемида и Аполон в Калаподи, на Деметра и Персефона в Коринт. Подобни са резултатите и от други изследвани светилища в Европа, като това на Деметра и Персефона в Апулия, Италия, на Изида и Великата богиня майка в Майнц, Германия, на Изида в Андалусия, Испания и др.

Археоботанични материали не липсват и от некрополите на територията на България. Намерените растения са предимно плодове: бадеми, орехи, лешници, жълъди, грозде, фурми, смокини, череши и др. На базата на досегашните проучвания на територията на България, данни за наличие на растителни останки в гробен контекст от елинистическата и римската епохи са регистрирани на около 30 обекта. От подобен характер са и останките от растения, открити в некропол на о. Тасос, в некропола на Саламис, Кипър. Информация за ботаничните останки намерени в некрополите в останалата част на Европа произлизат главно от гробове с кремации от римската епоха. Материалите в тях не се отличават съществено от тези, намирани у нас и в съседни райони.