

# Vascular flora of the Valley of Mesta River floristic region, SW Bulgaria

Valentina Goranova, Kiril Vassilev & Hristo Pedashenko

Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences, Department of Plant and Fungal Diversity and Resources, Acad. G. Bonchev Str., Bl. 23, 1113 Sofia, Bulgaria, e-mail: vgor@abv.bg (corresponding author)

Received: September 14, 2012 ▷ Accepted: March 15, 2013

**Abstract.** The Valley of Mesta River is an inter-mountain valley in the southwestern part of the country, within the Rila-Rhodope Massif. According to the floristic division of Bulgaria, the area along Mesta River between the Momina Kula gorge in the north and the border with Greece in the south is singled out as a distinct floristic region. The Valley of Mesta River is one of the places along which the Mediterranean climatic influence penetrates into the country. The geographic position, climate and specific orographic conditions in the area determine its peculiar sub-Mediterranean flora and vegetation. The analysis of results of own studies, as well as of literature data show that the flora of the region stands out with high plant diversity, accounting for 33.7% of the flora of the country. Herbaceous species dominate over trees and shrubs, while perennials and therophytes and hemicryptophytes are most numerous in the biological and life form spectrums. Euro-Asiatic, sub-Mediterranean and Euro-Mediterranean floristic elements prevail. High presence of species from the Southern Continental Centre of Origin and Distribution, as well as from the Mediterranean and Mountain Centres illustrate the transitional-Mediterranean features of the flora in the region. Endemic species and species of conservation concern are low in number. Recent composition and structure of the flora are heavily influenced and to a large extent appear a product of human impact. Data presented in this paper update the information on floristic richness at both regional and country level.

**Key words:** chorology, composition, flora, life forms, structure, the Valley of Mesta River floristic region

---

## Introduction

According to the floristic division of Bulgaria (Jordanov 1966), the area along Mesta River between the Momina Kula gorge in the north and the border with Greece in the south is singled out as distinct floristic region (Fig. 1). The boundaries of the region in the west are outlined by the lowest slopes of the Pirin and Stargach Mts, and in the east by the foothills of the Dabrash ridge in the Western Rhodopi Mts. The area is related to the Gotse Delchev Subregion of Mesta Region (Yordanova & al. 2002) and covers an ar-

ea of 588 km<sup>2</sup> (Meshinev & Apostolova 1998). Most of this territory falls into the Gotse Delchev Depression. The average altitude is about 550 m a.s.l. (Stefanov 2002). The valley is dominated by Palaeozoic granites (in the north) and limited (western boundary) Pliocene sediments and volcanic rocks (Bonchev & al. 1982). Floodplains are widely developed along the river (Vaptsarov & al. 1982). According to the country's climatic division (Velev 2002), the Valley of Mesta River is situated in the Continental-Mediterranean Region, characterized by warm, dry summer with low precipitations, mild winter and lack of per-

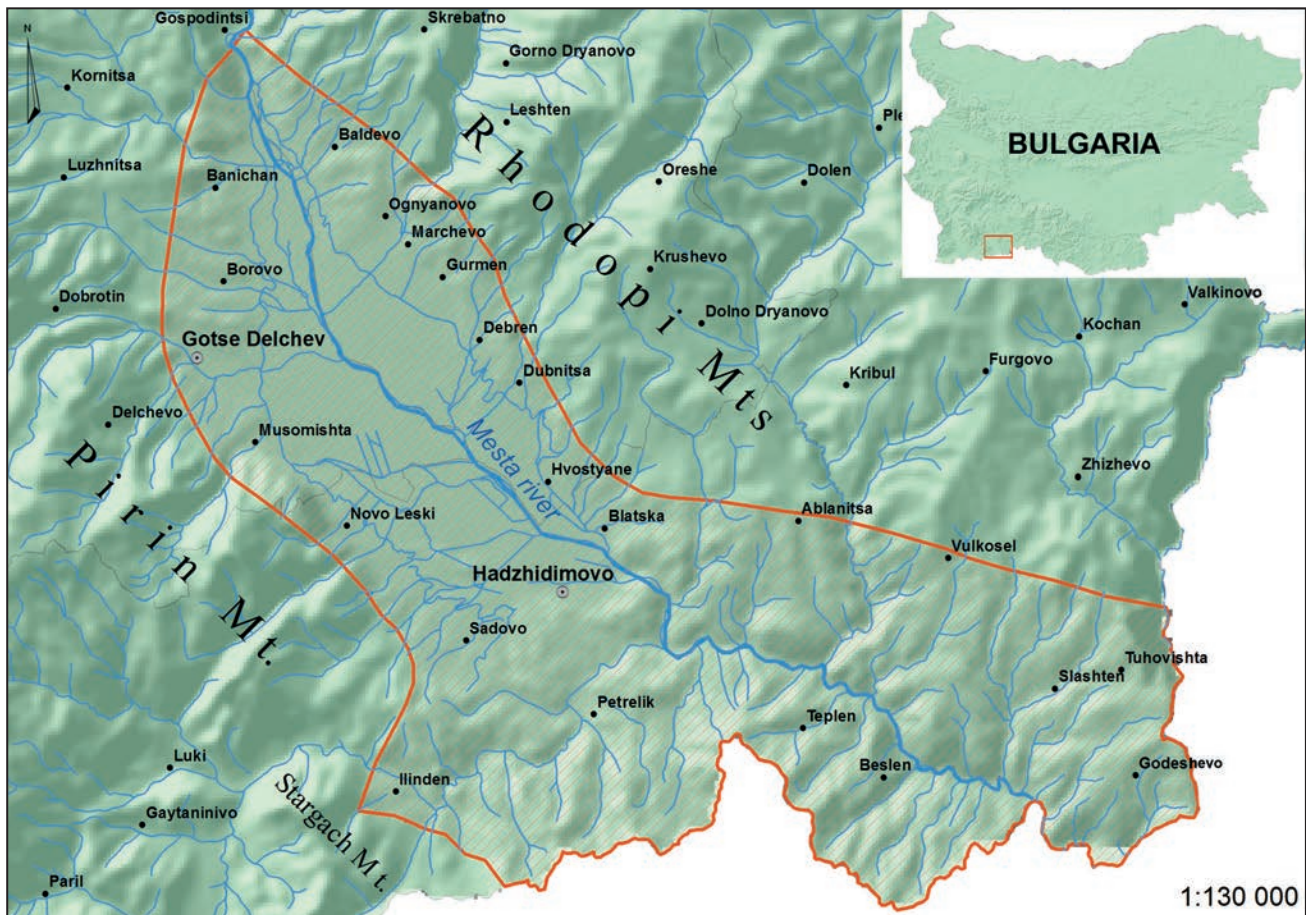


Fig. 1. Map of studied area with boundaries of the Valley of Mesta River floristic region.

manent snow cover. The average annual temperature in the Gotse Delchev Depression is 11.3 °C, with minimum precipitations in the summer (August) and maximum precipitations in the autumn (October), and an average annual value of about 700–750 mm. Soils in the area are shallow, skeletal, mainly cinnamon forest soils, alluvial and diluvial-alluvial, rankers, rendzinas and regosols. A characteristic feature of the region is strong erosion due to the relief, nature of soils, climate and human activity (Ninov 2002). The peculiar flora and vegetation of sub-Mediterranean type is formed in the valley of Mesta River under the influence of the Mediterranean climate penetrating from the south (Stojanov 1924, 1950; Stojanoff 1941; Bondev 1961; Velčev & Tonkov 1986). The floristic diversity of the area has not been subject to systematic and purposeful research. Information from earlier sources shows that data about the composition and structure of the flora were seldom published over the years and summarized information is lacking. More detailed information about the character of the flora and its geobot-

anical links are provided by Stojanov (1924), followed by over 80 years of relatively few published floristic data (Ganchev 1953; Velčev & al. 1960, Bondev 1961, 1963; Pashaliev 1995; Dimitrov 2002; Velčev 2002; Velčev & Vassilev 2002a, b). Summarized chorological information about the flora of the area was published in the successive editions of *Conspectus of the Bulgarian Vascular Flora* (Dimitrov (ed.) 2001, 2002; Assyov & Petrova (eds) 2006). Analysis of the third edition of this source has shown that more detailed studies are needed in the area. The focused floristic research in recent years conducted by the authors made possible not only the updating of the species composition of the flora, but also an analysis and evaluation of its present condition.

## Methods

A list of vascular plant species (mosses excluded) distributed in the floristic region was prepared, using

the data from the already published literature sources and results of own studies. The third edition of the *Conspectus of the Bulgarian Vascular Flora* (Assyov & Petrova 2006) was used as a basis for further analyses. Information published after 2006 was added to the data from the *Conspectus*, along with older data missing in the book (see *Species composition* in Results and discussion).

Field studies were conducted in the period 2007–2011, according to the transect method. Greater attention was paid to the border areas of Greece, which were neglected in the earlier studies. Species were identified with the help of *Flora of PR Bulgaria* (Jordanov 1963–1979; Velčev 1982, 1989; Kozhuharov 1995), *Field Guide to the Vascular Plants in Bulgaria* (Kozhuharov 1992), and *Key to the Plants of Bulgaria* (Delipavlov & Cheshmedzhiev 2003), and *Flora Europaea* (Tutin & al. 1968–1980, 1993). The new species for the floristic region were published under the heading “New floristic records in the Balkans” in *Phytologia Balcanica* (Goranova 2007; Vassilev & al. 2008, 2009; Pedashenko & al. 2009; Goranova & al. 2009, 2010, 2011a, b). Herbarium specimens were deposited in the Herbarium of the Institute of Biodiversity and Ecosystem Research (SOM).

Floristic analysis was performed according to Tolmachev’s approach (1974) used in similar studies of local floras by Stanev (1976), Vassilev & Andreev (1992), Gussev & al. (1997), Stoyanov (2005), Apostolova-Stoyanova & Stoyanov (2009), Vladimirov (2012a) and others. Floristic diversity was analyzed by the following indicators: number of species by categories, by genera and families, percentage contribution of the taxa of different ranks to the total number in Bulgaria and in the floristic region, most species-rich families and genera. Data on the Bulgarian flora reported by Petrova & al. (2005) and Petrova & Vladimirov (2010) were used in the comparative analysis. The biological spectrum was determined by life forms, according to Raunkier (1934), the floristic elements followed Assyov & Petrova (2006), and phytogeographic origin of species was determined by Stefanov (1943). Conservation values of species were determined under the Biological Diversity Act (2002, amended 2007, 2009), Petrova & Vladimirov (2009), and international Laws and Conventions related to biodiversity conservation. Endemic elements follow Petrova (2006) and Petrova & Vladimirov (2010).

## Results and discussion

### *Species composition*

The list of species presented in Table 1 contains 1358 species of vascular plants, 98 % of which are listed in the third edition of *Conspectus of the Bulgarian Vascular Flora* (Assyov & Petrova 2006). Distribution of about two-thirds of these species was confirmed for the floristic region during fieldwork and the rest were confirmed after consulting the literature and herbarium collections.

Analysis of data from the *Conspectus* has shown that some species were probably incorrectly reported for the area and, therefore, they were not included in Table 1 (see List at the end of Table 1). These were species which, according to the literature data, were distributed at high altitudes (above 800 and 1000 m a.s.l.) and were unlikely to occur in the floristic region. These species were not identified during field studies or in herbarium collections. However, keeping in mind the opinion of Stojanov (1924) that species distributed at high altitudes in the Rila, Pirin and Rhodopi Mts could be found on lower slopes around Mesta River, it is quite possible for some of them to be discovered during future studies.

In Table 1 all species found in the field were marked by<sup>(1)</sup> and those adopted from the literature after 2006 (Ančev 2007; Grozeva 2009; Raycheva 2009; Ančev & Krendl 2011; Goranova & al. 2012; Kuzmanov & Ančev 2012; Petrova 2012) were marked by<sup>(2)</sup>. There are four species marked by<sup>(3)</sup>. They were reported by Bondev (1961, 1963), but from the Western Rhodopes floristic region and were not included in Assyov & Petrova (2006). Presently, they occur within the Valley of Mesta River floristic region and were confirmed by the field studies.

In Table 1 the species are arranged in alphabetical order of families and genera within orders and classes. Some changes in names of the taxa are accepted, following the recent taxonomic studies of the Bulgarian flora (Ančev 2007; Stoyanov 2009; Kuzmanov 2012; Kuzmanov & Ančev 2012; Kuzmanov & Gussev 2012; Vladimirov 2012b); the species names by which they appear in Assyov & Petrova (2006) are shown in brackets.

The observed species composition does not claim to be absolutely complete, since the flora is a dynamic system changing over time. The accumulated current data feature the main quantitative characteristics, structure and ecological patterns of the flora in the area.

Table 1. Floristic list.

a – annual; a-b – annual to biennial; b – biennial; b-p – biennial to perennial; p – perennial; ssh – semi-shrub; sh – shrub; sh-tr – shrub to tree; tr – tree.

Th – Therophytes; Ch – Chamaephytes; H – Hemicyptophytes; G – Geophytes; Ph – Phanerophytes.

MedC – Thermophytes from the Mediterranean Centre; SCC – Thermophytes from the South Continental Centre; NCC – Thermophytes from the North Continental Centre; SBC – Mesotherms and microtherms from the Silvoboreal Centre; MtC – Thermophytes, mesotherms and microtherms from the Mountain Centre; Adv – Plants from other phytogeographical centres penetrating into Bulgaria by secondary colonization.

Taxa	Biological type	Life forms	Floristic elements	
			Assyov & Petrova (2006)	Stefanov (1943)
1	2	3	4	5
<b>Equisetophyta</b>				
<b>Equisetaceae</b>				
<i>Equisetum arvense</i> L.	p	H	Boreal	NCC
<i>Equisetum palustre</i> L.	p	H	Boreal	NCC
<i>Equisetum ramosissimum</i> Desf.	p	H	Boreal	MedC
<i>Equisetum telmateia</i> Ehrh.	p	H	Boreal	MedC
<b>Polypodiophyta</b>				
<b>Aspidiaceae</b>				
<i>Dryopteris filix-mas</i> (L.) Schott.	p	H	Boreal	SBC
<b>Aspleniaceae</b>				
<i>Asplenium adianthum-nigrum</i> L.	p	H	subBoreal	MtC
<i>Asplenium ruta-muraria</i> L.	p	H	Boreal	SBC
<i>Asplenium septentrionale</i> (L.) Hoffm.	p	H	Boreal	SBC
<i>Asplenium trichomanes</i> L.	p	H	Kos	SBC
<i>Ceterach officinarum</i> DC.	p	H	subMed	MtC
<b>Athyriaceae</b>				
<i>Cystopteris fragilis</i> (L.) Bernh.	p	H	Kos	SBC
<b>Hypolepidaceae</b>				
<i>Pteridium aquilinum</i> (L.) Kuhn	p	H	Kos	MedC
<b>Polypodiaceae</b>				
<i>Polypodium vulgare</i> L.	p	Ch	Boreal	SBC
<b>Pinophyta</b>				
<b>Cupressaceae</b>				
<i>Juniperus communis</i> L.	sh	Ph	subBoreal	SBC
<i>Juniperus deltoides</i> R.P. Adams (= <i>J. oxycedrus</i> auct.)	sh	Ph	Med	MedC
<b>Magnoliophyta</b>				
<b>Magnoliopsida</b>				
<b>Aceraceae</b>				
<i>Acer campestre</i> L.	tr	Ph	Eur-OT	MtC
<i>Acer platanoides</i> L.	tr	Ph	subMed	SBC
<i>Acer tataricum</i> L.	tr	Ph	subMed	NCC
<b>Alismataceae</b>				
<i>Alisma gramineum</i> Lej.	p	H	Boreal	SBC
<i>Alisma lanceolatum</i> With.	p	H	Boreal	SBC
<i>Alisma plantago-aquatica</i> L.	p	H	Boreal	SBC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Sagittaria sagittifolia</i> L.	p	H	Eur-As	SCC
<b>Amaranthaceae</b>				
<i>Amaranthus albus</i> L.	a	Th	CAM (Adv)	Adv
<i>Amaranthus blitoides</i> Watson	a	Th	NAM (Adv)	Adv
<i>Amaranthus graecizans</i> L.	a	Th	Med	Adv
<i>Amaranthus hybridus</i> L.	a	Th	SAM (Adv)	Adv
<i>Amaranthus lividus</i> L.	a	Th	CAM (Adv)	Adv
<i>Amaranthus retroflexus</i> L.	a	Th	Kos	Adv
<b>Anacardiaceae</b>				
<i>Cotinus coggygria</i> Scop.	sh	Ph	Med-As	MtC
<i>Pistacia terebinthus</i> L.	tr	Ph	Pont-Med	MedC
<b>Apiaceae</b>				
<i>Aegopodium podagraria</i> L.	p	H	Eur-Sib	SBC
<i>Aethusa cynapium</i> L.	a-b	Th	Eur-Sib	SBC
<i>Angelica sylvestris</i> L.	a-b	H	Eur-Sib	SBC
<i>Anthriscus caucalis</i> M. Bieb.	a	Th	Eur-Med	SCC
<i>Anthriscus cerefolium</i> (L.) Hoffm.	a	Th	Eur-Med	SCC
<i>Anthriscus sylvestris</i> (L.) Hoffm.	p	H	Eur	SBC
<i>Berula erecta</i> (Huds.) Coville	p	H	Eur-Sib	NCC
<i>Bifora radians</i> M. Bieb.	a	Th	Eur-Med	SCC
<i>Bupleurum apiculatum</i> Friv.	a	Th	Bal	MedC
<i>Bupleurum praealtum</i> L.	a	Th	subMed	MtC
<i>Bupleurum rotundifolium</i> L.	a	Th	Eur-As	SCC
<i>Caucalis platycarpus</i> L.	a	Th	Eur-CAs	SCC
<i>Chaerophyllum bulbosum</i> L.	b	H	Eur-As	SBC
<i>Chaerophyllum temulentum</i> L.	b	Th	Eur-Med	SBC
<i>Conium maculatum</i> L.	a-b	Th	Eur-As	SCC
<i>Daucus broteri</i> Ten.	a	Th	Med	MedC
<i>Daucus carota</i> L.	a	Th	Eur-As	SCC
<i>Eryngium campestre</i> L.	p	H	Pont-Med	NCC
<i>Falcaria vulgaris</i> Bernh.	a-b	H	Eur-As	NCC
<i>Ferula heuffelii</i> Griseb.	p	H	Carp-Bal	MtC
<i>Ferulago sylvatica</i> (Besser) Rchb.	p	H	subMed	NCC
<i>Heracleum sibiricum</i> L.	p	H	Eur-As	SBC
<i>Heracleum ternatum</i> Velen.	p	H	Med	SBC
<i>Laser trilobum</i> (L.) Borkh.	p	H	Eur-Med	MtC
<i>Myrrhoides nodosa</i> (L.) Cannon	a	Th	Eur-As	MtC
<i>Oenanthe aquatica</i> (L.) Poir.	p	H	Eur-Sib	SBC
<i>Oenanthe banatica</i> Heuff.	p	H	Pont	MtC
<i>Oenanthe fistulosa</i> L.	p	H	Eur-Med	SCC
<i>Oenanthe silaifolia</i> M. Bieb.	p	H	Eur-Med	SCC
<i>Oenanthe stenoloba</i> Schur	p	H	subMed	MtC
<i>Orlaya grandiflora</i> (L.) Hoffm.	a	Th	Eur-As	MedC
<i>Pastinaca sativa</i> L.	p	H	Eur-Sib	NCC
<i>Peucedanum arenarium</i> Waldst. & Kit.	p	H	Eur-Med	NCC
<i>Physospermum cornubiense</i> (L.) DC.	p	H	Eur-Med	MtC
<i>Pimpinella saxifraga</i> L.	p	H	Eur-As	NCC
<i>Sanicula europaea</i> L.	p	H	Eur-Sib	SBC
<i>Scandix pecten-veneris</i> L.	a	Th	Eur-As	SCC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Seseli libanotis</i> (L.) Koch	p	H	Eur-Sib	NCC
<i>Seseli rigidum</i> Waldst. & Kit.	p	H	subMed	MtC
<i>Tordylium maximum</i> L.	a-b	Th	subMed	SCC
<i>Torilis arvensis</i> (Hudson) Link	a	Th	Eur-As	SCC
<i>Torilis japonica</i> (Houtt.) DC.	a-b	Th	Eur-As	SCC
<i>Torilis leptophylla</i> (L.) Rchb. f.	a	Th	Med-CAs	SCC
<i>Torilis nodosa</i> (L.) Gaertn.	a	Th	Eur-As	SCC
<i>Torilis ucranica</i> Spreng.	a	Th	sPont	MedC
<i>Trinia glauca</i> (L.) Dumort.	p	H	subMed	MtC
<i>Turgenia latifolia</i> (L.) Hoffm.	a	Th	Eur-As	SCC
<b>Apocynaceae</b>				
<i>Vinca major</i> L.	p	H	Eur-Med	MtC
<b>Araliaceae</b>				
<i>Hedera helix</i> L.	sh	Ch	Eur-As	MtC
<b>Aristolochiaceae</b>				
<i>Aristolochia clematitis</i> L.	p	H	Eur-Med	NCC
<i>Aristolochia pallida</i> Willd.	p	G	subMed-As	MtC
<i>Asarum europaeum</i> L.	p	H	Eur-Sib	SBC
<b>Asclepiadaceae</b>				
<i>Asclepias syriaca</i> L.	p	Ch	NAm(Adv)	Adv
<i>Vincetoxicum hirsutifolium</i> Medik.	p	H	Eur-Sib	NCC
<b>Asparagaceae</b>				
<i>Asparagus officinalis</i> L.	p	H	Eur	SCC
<i>Asparagus tenuifolius</i> Lam.	p	G	Pont-Med	MtC
<i>Asparagus verticillatus</i> L.	p	H	Pont-As	SCC
<i>Ruscus aculeatus</i> L.	p	Ph	sPont	MedC
<i>Ruscus hypoglossum</i> L.	p	H	Pont	SCC
<b>Asteraceae</b>				
<i>Achillea ageratifolia</i> (Sibth. & Sm.) Boiss. <sup>2</sup>	p	H	Bal	MtC
<i>Achillea clypeolata</i> Sm.	p	H	Bal	MtC
<i>Achillea coarctata</i> Poir.	p	H	Pont-Med	MtC
<i>Achillea collina</i> Rchb.	p	H	Eur-subMed	NCC
<i>Achillea crithmifolia</i> Waldst. & Kit.	p	H	Pann-Bal	MtC
<i>Achillea nobilis</i> L.	p	H	Eur-WAs	NCC
<i>Achillea pannonica</i> Scheele	p	H	Pann-Bal	MtC
<i>Achillea pseudopectinata</i> Janka	p	H	Bal	MtC
<i>Achillea setacea</i> Waldst. & Kit.	p	H	subMed	NCC
<i>Anthemis arvensis</i> L.	a	Th	Eur-Med	MedC
<i>Anthemis cotula</i> L.	a	Th	Eur-Sib	MedC
<i>Anthemis ruthenica</i> M. Bieb.	a	Th	subMed	NCC
<i>Arctium lappa</i> L.	b	Th	Eur-Med	SCC
<i>Arctium minus</i> Bernh.	b	H	Eur-As	NCC
<i>Arctium tomentosum</i> Mill.	b	Th	Eur-Med	SCC
<i>Artemisia absinthium</i> L.	p	H	Pont-Med	SCC
<i>Artemisia annua</i> L.	a	Th	Eur-Med	SCC
<i>Artemisia campestris</i> L.	p	H	Eur-Sib	NCC
<i>Artemisia scoparia</i> Waldst. & Kit.	a-b	Th	Eur-As	SCC
<i>Artemisia vulgaris</i> L.	p	H	subBoreal	NCC
<i>Aster amellus</i> L.	p	H	Eur-Med	NCC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Bellis perennis</i> L.	p	H	Eur-As	MtC
<i>Bidens cernuus</i> L.	a	Th	Boreal	NCC
<i>Bidens frondosus</i> L. <sup>2</sup>	a	Th	Adv	Adv
<i>Bidens tripartita</i> L.	a	Th	Boreal	NCC
<i>Bombycilaena erecta</i> (L.) Smoljan.	a	Th	Eur-Med	SCC
<i>Carduus acanthoides</i> L.	b	H	Eur	NCC
<i>Carduus candicans</i> Waldst. & Kit.	a-p	H	Bal-Dac	MtC
<i>Carduus nutans</i> L.	b	H	Eur-Med	SBC
<i>Carduus thoermeri</i> Weinm.	b	H	Pont-Pan-Bal	SBC
<i>Carlina acanthifolia</i> All.	p	H	Eur	MtC
<i>Carlina vulgaris</i> L.	b	H	Eur-As	NCC
<i>Carthamus lanatus</i> L.	a-b	Th	subMed	SCC
<i>Centaurea affinis</i> Friv.	p	H	Bal-Dac	MtC
<i>Centaurea alba</i> L.	a	Th	subMed	MtC
<i>Centaurea biebersteinii</i> DC.	b-p	Ch	subMed	NCC
<i>Centaurea calcitrapa</i> L.	b	Th	Med	SCC
<i>Centaurea cuneifolia</i> Sm.	b	Ch	Bal	MedC
<i>Centaurea cyanus</i> L.	a	Th	Eur-Med	SCC
<i>Centaurea diffusa</i> Lam.	a-b	Th	Pont-Med	SCC
<i>Centaurea jacea</i> L.	p	H	Eur-Sib	SBC
<i>Centaurea rocheliana</i> (Heuffel) Dostál	p	H	Eur	MtC
<i>Centaurea salomonitana</i> Vis.	p	H	Pont-Med	NCC
<i>Centaurea scabiosa</i> L.	p	H	Eur-Sib	SBC
<i>Centaurea solstitialis</i> L.	a	Th	Eur-Med	SCC
<i>Centaurea stenolepis</i> A. Kern.	p	H	subMed	MtC
<i>Centaurea stoebe</i> L.	p	H	subMed	NCC
<i>Centaurea triumfetti</i> All.	p	H	subMed	MtC
<i>Chondrilla juncea</i> L.	b	Th	Eur-Sib	SCC
<i>Cichorium intybus</i> L.	p	H	Eur-Sib	SCC
<i>Cirsium arvense</i> (L.) Scop.	p	H	Eur-As	SCC
<i>Cirsium canum</i> (L.) All.	p	H	Eur-Med	NCC
<i>Cirsium creticum</i> (Lam.) D'Uvr.	p	H	Med	MedC
<i>Cirsium italicum</i> (Savi) DC.	a	Th	Med	MedC
<i>Cirsium ligulare</i> Boiss.	a-b	H	Med	MtC
<i>Cirsium vulgare</i> (Savi) Ten.	b	H	Eur-Med	NCC
<i>Cota austriaca</i> (Jacq.) Sch. Bip. (= <i>Anthemis austriaca</i> Jacq.)	a	Th	Eur-Med	MtC
<i>Cota tinctoria</i> (L.) J. Gay (= <i>Anthemis tinctoria</i> L.)	p	H	Eur-As	SCC
<i>Crepis biennis</i> L.	b	Th	subMed	MtC
<i>Crepis foetida</i> L.	a	Th	Eur-Med	MedC
<i>Crepis pulchra</i> L.	a	Th	Eur-Med	SCC
<i>Crepis sancta</i> (L.) Babc.	a	Th	subMed	SCC
<i>Crepis setosa</i> Haller f.	a	Th	Eur-Med	MedC
<i>Crepis tectorum</i> L.	a	Th	Eur-Sib	SCC
<i>Crupina vulgaris</i> Cass.	a	Th	subMed	MtC
<i>Doronicum columnae</i> Ten. <sup>1</sup>	p	H	Pont-Med	SCC
<i>Doronicum hungaricum</i> Rchb. f.	p	H	Pann-Bal	MtC
<i>Echinops banaticus</i> Schrad.	p	H	subMed	MtC
<i>Echinops microcephalus</i> Sm.	p	H	subMed	MedC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Echinops ritro</i> L.	p	H	subMed	NCC
<i>Echinops sphaerocephalus</i> L.	p	H	Eur-Med	NCC
<i>Erigeron acris</i> L.	p	H	Boreal	SBC
<i>Erigeron annuus</i> (L.) Pers. <sup>2</sup>	a	Th	NAm (Adv)	Adv
<i>Erigeron canadensis</i> L. (= <i>Conyza canadensis</i> (L.) Cronquist)	a-b	Th	NAm (Adv)	Adv
<i>Erigeron sumatrensis</i> Retz. <sup>2</sup>	a	Th	SAm (Adv)	Adv
<i>Eupatorium cannabinum</i> L.	p	H	Eur-As	NCC
<i>Filago arvensis</i> L. (= <i>Logfia arvensis</i> (L.) Holub)	a	Th	Eur-Med	SCC
<i>Filago lutescens</i> Jord.	a	Th	Boreal	SCC
<i>Filago minima</i> (Sm.) Pers. (= <i>Logfia minima</i> (Sm.) Dumort.)	a	Th	Eur-Sib	SCC
<i>Filago vulgaris</i> Lam.	a	Th	Eur-As	SCC
<i>Galatella linosyris</i> (L.) Rchb.f. (= <i>Aster linosyris</i> (L.) Bernh.)	p	H	Eur-Med	NCC
<i>Galinsoga ciliata</i> (Raf.) S.F. Blake <sup>2</sup>	a	Th	SAm(Adv)	Adv
<i>Galinsoga parviflora</i> Cav.	a	Th	SAm (Adv)	Adv
<i>Helianthus tuberosus</i> L. <sup>2</sup>			Adv	Adv
<i>Hieracium cymosum</i> L.	p	H	Eur-Sib	NCC
<i>Hieracium echioides</i> Lumn.	p	H	subMed	NCC
<i>Hieracium halimifolium</i> Fr.	p	H	subMed	NCC
<i>Hieracium hoppeanum</i> Schult.	p	H	Eur-Med	MtC
<i>Hieracium latifolium</i> Link	p	H	subMed	NCC
<i>Hieracium pilosella</i> L.	p	H	Eur-Med	MtC
<i>Hieracium praealtum</i> Gochnat	p	H	Med	NCC
<i>Hypochaeris radicata</i> L.	p	H	Eur-Med	MtC
<i>Inula bifrons</i> (L.) L.	b-p	Th	Eur-Med	MtC
<i>Inula britannica</i> L.	p	H	Eur-Med	SCC
<i>Inula conyza</i> L.	p	H	Eur-Med	MtC
<i>Inula ensifolia</i> L.	p	H	Eur-Med	NCC
<i>Inula germanica</i> L.	p	H	subMed	NCC
<i>Inula hirta</i> L.	p	H	Eur-Sib	NCC
<i>Inula oculus-christi</i> L.	p	H	Eur-Med	SCC
<i>Inula salicina</i> L.	p	H	Eur-As	SCC
<i>Jacobaea erucifolia</i> (L.) P. Geartn., B. Mey. & Scherb. (= <i>Senecio erucifolius</i> L.)	p	H	Eur-As	SBC
<i>Jacobaea vulgaris</i> Gaertn. (= <i>Senecio jacobaea</i> L.)	p	H	Eur-Med	NCC
<i>Jurinea consanguinea</i> DC.	p	H	subMed-Sib	NCC
<i>Lactuca quercina</i> L.	b	Th	Eur	MtC
<i>Lactuca saligna</i> L.	a-b	Th	Pont-OT	SCC
<i>Lactuca serriola</i> L.	a-b	Th	Eur-As	SCC
<i>Lactuca viminea</i> (L.) J. & C. Presl	a-b	Th	Eur-Med	SCC
<i>Laphangium luteo-album</i> (L.) Tzvelev (= <i>Gnaphalium luteo-album</i> L.)	a	Th	Kos	SCC
<i>Lapsana communis</i> L.	a	Th	Eur-Sib	NCC
<i>Leontodon autumnalis</i> L.	p	H	Eur-Sib	SBC
<i>Leontodon crispus</i> Vill.	p	H	Pont-Med	SCC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Leontodon hispidus</i> L.	p	H	Eur-Med	NCC
<i>Leucanthemum vulgare</i> Lam.	p	H	Eur-Sib	SBC
<i>Matricaria chamomilla</i> L. (= <i>Chamomilla recutita</i> (L.) Rauschert)	a	Th	Eur-As	SCC
<i>Matricaria perforata</i> Mérat	a	Th	Eur-Med	NCC
<i>Matricaria trichophylla</i> (Boiss.) Boiss.	a-b	Th	Med	MtC
<i>Mycelis muralis</i> (L.) Dumort.	p	H	Med	MtC
<i>Onopordum acanthium</i> L.	a	Th	Eur-Med	SCC
<i>Petasites hybridus</i> (L.) Gaertn.	p	H	Eur	MtC
<i>Picnomon acarna</i> (L.) Cass.	a	Th	Med	SCC
<i>Picris hieracioides</i> L.	p	H	Eur-As	NCC
<i>Picris pauciflora</i> Willd.	a	Th	Med	SCC
<i>Ptilostemon afer</i> (Jacq.) Greuter	a	Th	Med	SCC
<i>Pulicaria dysenterica</i> (L.) Bernh.	a	Th	Eur-Med	MedC
<i>Pulicaria vulgaris</i> Gaertn.	a	Th	Eur-As	SCC
<i>Scolymus hispanicus</i> L.	a	Th	Med	MedC
<i>Scorzonera cana</i> (C.A. Mey.) O. Hoffm.	p	H	Med	SCC
<i>Scorzonera hispanica</i> L.	p	H	Med	NCC
<i>Scorzonera laciniata</i> L.	a-b	H	Med	NCC
<i>Scorzonera mollis</i> M. Bieb. <sup>1</sup>	p	G	Eur	SCC
<i>Senecio sylvaticus</i> L.	a	Th	Eur-Sib	SBC
<i>Senecio vernalis</i> Waldst. & Kit.	a	Th	Eur-Med	SCC
<i>Senecio viscosus</i> L.	a	Th	Eur-Med	SCC
<i>Senecio vulgaris</i> L.	a	Th	Eur-As	SCC
<i>Serratula tinctoria</i> L.	p	H	Eur-Sib	NCC
<i>Silybum marianum</i> (L.) Gaertn.	a	Th	Med	SCC
<i>Solidago gigantea</i> Aiton <sup>2</sup>	p	H	NAm (Adv)	Adv
<i>Solidago virgaurea</i> L.	p	H	Boreal	SBC
<i>Sonchus arvensis</i> L.	a-b	H	Kos	NCC
<i>Sonchus asper</i> (L.) Hill	a-b	Th	Eur	SCC
<i>Sonchus oleraceus</i> L.	a-b	Th	Kos	SCC
<i>Tanacetum corymbosum</i> (L.) Sch. Bip.	p	H	Eur-Med	MtC
<i>Tanacetum macrophyllum</i> (Waldst. & Kit.) Sch. Bip	p	H	Eur	MtC
<i>Tanacetum parthenium</i> (L.) Sch. Bip.	p	H	Eur-OT	SCC
<i>Tanacetum vulgare</i> L.	p	H	Eur-Sib	NCC
<i>Taraxacum officinale</i> L.	p	H	Kos	SBC
<i>Taraxacum serotinum</i> (Waldst. & Kit.) Poir.	p	H	Pont	NCC
<i>Tragopogon balcanicus</i> Velen.	b	T	Bal	MtC
<i>Tussilago farfara</i> L.	p	H	Eur-As	NCC
<i>Xanthium italicum</i> Moretti	a	Th	NAm(Adv)	Adv
<i>Xanthium spinosum</i> L.	a	Th	Kos	Adv
<i>Xanthium strumarium</i> L.	a	Th	Eur	Adv
<i>Xeranthemum annuum</i> L.	a	Th	subMed	NCC
<b>Balsaminaceae</b>				
<i>Impatiens noli-tangere</i> L.	a	Th	Eur-As	SBC
<b>Berberidaceae</b>				

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Berberis vulgaris</i> L.	sh	Ph	Eur-Med	SCC
<b>Betulaceae</b>				
<i>Alnus glutinosa</i> (L.) Gaertn.	tr	Ph	Med-CAs	SBC
<i>Betula pendula</i> Roth	tr	Ph	Eur-Sib	SBC
<b>Boraginaceae</b>				
<i>Alkanna primuliflora</i> Griseb.	p	Ch	Bal	MedC
<i>Anchusa azurea</i> Mill.	p	H	subMed	SCC
<i>Anchusa barrelieri</i> (All.) Vitman	p	H	subMed	MtC
<i>Anchusa officinalis</i> L.	p	H	Pont-Med	NCC
<i>Asperugo procumbens</i> L.	a	Th	Eur-As	SCC
<i>Buglossoides arvensis</i> (L.) I.M. Johnst.	a	Th	Eur-As	SCC
<i>Buglossoides purpureoacerulea</i> (L.) I.M. Johnst.	p	H	Eur-As	MtC
<i>Buglossoides sibthorpiana</i> (Griseb.) Czerep.	a	Th	Med	SCC
<i>Cerintho minor</i> L.	a-b	H	Pont-Med	SCC
<i>Cynoglossum creticum</i> Mill.	a-b	Th	Med-CAs	MedC
<i>Cynoglossum hungaricum</i> Simonk.	b	H	subMed	MedC
<i>Cynoglossum officinale</i> L.	b	H	sPont	MtC
<i>Echium italicum</i> L.	b	H	subMed	SCC
<i>Echium russicum</i> J.F. Gmel.	b	H	subMed	NCC
<i>Echium vulgare</i> L.	b	H	Eur-As	NCC
<i>Heliotropium europaeum</i> L.	a	Th	subMed	SCC
<i>Heliotropium suaveolens</i> M. Bieb.	a	Th	subMed	SCC
<i>Lappula barbata</i> (M. Bieb.) Gurke	a	Th	Med-CAs	SCC
<i>Lappula squarrosa</i> (Retz.) Dumort.	a	Th	subBoreal	SCC
<i>Lithospermum officinale</i> L.	p	H	Eur-As	NCC
<i>Lycopsis arvensis</i> L.	a	Th	Eur-As	SCC
<i>Myosotis arvensis</i> (L.) Hill	a	Th	Eur-As	SCC
<i>Myosotis cyanea</i> (Boiss. & Heldr.) Peev & Andreev	p	H	Med-SAs	SCC
<i>Myosotis incrassata</i> Guss.	a	Th	subMed	SCC
<i>Myosotis laxa</i> Lehm.	b	H	subBoreal	
<i>Myosotis ramosissima</i> Rochel	a	Th	subMed	SCC
<i>Myosotis scorpioides</i> L.	p	H	Eur-NAM	Adv
<i>Myosotis sicula</i> Guss.	a-b	Th	Eur-As	MedC
<i>Myosotis sparsiflora</i> Pohl	a	Th	Eur-As	SBC
<i>Myosotis stricta</i> Roem. & Schult.	a	Th	Eur-As	SCC
<i>Myosotis sylvatica</i> Hoffm.	p	H	Eur-As	SBC
<i>Nonea pulla</i> (L.) DC.	p	H	subMed	NCC
<i>Nonea ventricosa</i> (Sm.) Griseb.	a	Th	subMed	SCC
<i>Onosma aucherana</i> DC.	p	H	subMed	SCC
<i>Onosma echioides</i> L.	p	H	Med	SCC
<i>Onosma heterophylla</i> Griseb.	p	H	subMed	SCC
<i>Onosma visianii</i> Clementi	p	H	Pont-Med	MtC
<i>Pulmonaria officinalis</i> L.	p	H	Eur	MtC
<i>Symphytum bulbosum</i> K.F. Schimp.	p	H	Med	MedC
<i>Symphytum officinale</i> L.	p	H	Eur-As	NCC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Symphytum ottomanum</i> Friv.	p	H	Bal-Anat	MtC
<i>Symphytum tuberosum</i> L.	p	H	Eur-Med	MtC
<b>Brassicaceae</b>				
<i>Aethionema saxatile</i> (L.) R. Br. <sup>1</sup>	a-p	H	subMed	MtC
<i>Alliaria petiolata</i> (M. Bieb.) Cavara & Grande	a-b	H	Eur-As	SBC
<i>Alyssum alyssoides</i> (L.) L.	a-b	Th	Eur-Med	SCC
<i>Alyssum corymbosoides</i> Formanek	p	H	Pont-Bal	MtC
<i>Alyssum murale</i> Waldst. & Kit.	p	H	Eur-subMed	MtC
<i>Alyssum minus</i> (L.) Rothm. <sup>2</sup>	a	Th	Eur-Med	SCC
<i>Alyssum strigosum</i> Banks & Sol.	a	Th	subMed	SCC
<i>Alyssum tortuosum</i> Willd.	p	Ch	Pont-Med	NCC
<i>Alyssum turkestanicum</i> Regel & Schmalh.	a	Th	Eur-Med	SCC
<i>Arabidopsis thaliana</i> (L.) Heynh.	a-b	Th	subBoreal	SCC
<i>Arabis auriculata</i> Lam.	a-b	Th	Eur-As	MtC
<i>Arabis sagittata</i> (Bertol.) DC.	a	Th	Eur-Med	SCC
<i>Arabis turrita</i> L.	p	H	subMed	MtC
<i>Aurinia saxatilis</i> (L.) Desv.	p	H	Eur-Med	MtC
<i>Barbarea vulgaris</i> R. Br.	p	H	Eur-As	NCC
<i>Berberoa incana</i> (L.) DC.	p	H	sPont	NCC
<i>Berberoa obliqua</i> (Sm.) DC.	a-b	Th	Med	MedC
<i>Brassica nigra</i> (L.) Koch	a	Th	Kos	SCC
<i>Brassica rapa</i> L.	a-b	Th	Med-Atl	SCC
<i>Calepina irregularis</i> (Asso) Thell.	a	Th	Med	SCC
<i>Camelina sativa</i> (L.) Crantz <sup>1</sup>	a-b	Th	Pont-CAs	SCC
<i>Capsella bursa-pastoris</i> (L.) Medik.	a-b	Th	Kos	SCC
<i>Cardamine bulbifera</i> (L.) Crantz	p	H	subBoreal	MtC
<i>Cardamine hirsuta</i> L.	p	H	Eur-As	SCC
<i>Cardamine matthioli</i> Moretti <sup>1</sup>	p	H	Eur	
<i>Cardaria draba</i> (L.) Desv.	p	H	Eur-Med	SCC
<i>Clypeola jonthlaspi</i> L.	a	Th	Med	SCC
<i>Coronopus squamatus</i> (Forssk.) Asch. (= <i>Lepidium squamatum</i> Forsk.)	a-b	Th	Eur-Med	MedC
<i>Descurainia sophia</i> (L.) Prantl	a-b	Th	Eur-As	SCC
<i>Draba muralis</i> L.	a-b	Th	Eur-Med	MedC
<i>Erophila verna</i> (L.) Chevall.	a	Th	Eur-MedCAs	SCC
<i>Erysimum diffusum</i> Ehrh. <sup>1</sup>	b	H	CSEur	NCC
<i>Hesperis matronalis</i> L.	p	Ch	Med	SBC
<i>Hesperis sylvestris</i> Crantz	b-p	H	Eur	SCC
<i>Lepidium campestre</i> (L.) R. Br.	a-b	Th	Eur-subMed	MedC
<i>Lepidium graminifolium</i> L.	a	Th	Eur-Med	MedC
<i>Lepidium perfoliatum</i> L.	a	Th	Eur-CAs	SCC
<i>Lepidium rudemale</i> L.	a-b	Th	Eur-As	SCC
<i>Lunaria annua</i> L.	a-b	Th	Med	MtC
<i>Myagrimum perfoliatum</i> L.	a	Th	Eur-Med	SCC
<i>Nasturtium officinale</i> R. Br.	p	H	Eur-As	SCC
<i>Neslia paniculata</i> (L.) Desv.	a	Th	As	SCC
<i>Raphanus raphanistrum</i> L.	a	Th	Eur-Sib	MedC
<i>Rorippa amphibia</i> (L.) Besser	p	H	Eur-As	SBC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Rorippa austriaca</i> (Crantz) Besser	p	H	Eur-Med	SCC
<i>Rorippa palustris</i> (L.) Besser	a-b	H	subSBoreal	SBC
<i>Rorippa prolifera</i> (Heuff.) Neilr.	a-b	Th	Bal-Dac	MtC
<i>Rorippa pyrenaica</i> (L.) Rchb.	p	H	subMed	MtC
<i>Rorippa sylvestris</i> (L.) Besser	p	H	Eur-As	SBC
<i>Rorippa thracica</i> (Griseb.) Fritsch	p	H	subMed	MtC
<i>Sinapis arvensis</i> L.	a	Th	Med	SCC
<i>Sisymbrium altissimum</i> L.	a-b	Th	Pont-subMed	SCC
<i>Sisymbrium loeselii</i> L.	a	Th	Eur-As	SCC
<i>Sisymbrium officinale</i> (L.) Scop.	a-b	Th	Eur-Sib	MedC
<i>Sisymbrium orientale</i> L.	a-b	Th	Eur-As	SCC
<i>Sisymbrium polyceratium</i> L.	a	Th	Med	SCC
<i>Teesdalia coronopifolia</i> (J.P. Bergeret) Thell <sup>1</sup>	a	Th	subMed-CAS	MedC
<i>Thlaspi alliaceum</i> L.	a	Th	subMed	MedC
<i>Thlaspi arvense</i> L.	b	Th	Eur-As	SCC
<i>Thlaspi perfoliatum</i> L.	a	Th	Eur-Med	SCC
<i>Turritis glabra</i> L.	a	Th	Boreal	SBC
<b>Butomaceae</b>				
<i>Butomus umbellatus</i> L.	p	H	Eur-As	SCC
<b>Campanulaceae</b>				
<i>Asyneuma anthericoides</i> (Janka) Bornm. <sup>1</sup>	p	H	Bal	MtC
<i>Campanula bononiensis</i> L.	p	H	Eur	MtC
<i>Campanula lanata</i> Friv.	b	H	Bal	MtC
<i>Campanula lingulata</i> Waldst. & Kit.	p	H	Ap-Bal	MtC
<i>Campanula persicifolia</i> L.	p	H	Eur-Sib	SBC
<i>Campanula rapunculoides</i> L.	p	H	Eur	MtC
<i>Campanula rapunculus</i> L.	a	Th	Eur-Sib	MedC
<i>Campanula scutellata</i> Griseb. <sup>1</sup>	a	Th	Bal	MtC
<i>Campanula sparsa</i> Friv.	a	Th	Bal	MtC
<i>Campanula trachelium</i> L.	p	H	Boreal	SBC
<i>Jasione heldreichii</i> Boiss. & Orph.	b-p	Th	Eur-Med	MedC
<i>Legousia speculum-veneris</i> (L.) Chaix	a	Th	Eur-Med	MedC
<i>Trachelium rumelianum</i> Hampe	p	H	Bal	MtC
<b>Cannabinaceae</b>				
<i>Humulus lupulus</i> L.	p	H	Eur-Sib	NCC
<b>Caprifoliaceae</b>				
<i>Sambucus ebulus</i> L.	p	H	Eur-Med	SCC
<i>Sambucus nigra</i> L.	sh	Ph	Eur-Med	MtC
<i>Viburnum lantana</i> L.	sh	Ph	Eur-Med	MtC
<i>Viburnum opulus</i> L.	sh	Ph	Eur-Sib	MtC
<b>Caryophyllaceae</b>				
<i>Agrostemma githago</i> L.	a	Th	Eur-As	SCC
<i>Arenaria filicaulis</i> Fenzl	a	Th	Bal-Anat	SCC
<i>Arenaria leptoclados</i> (Rchb.) Guss.	a	Th	Eur-As	SCC
<i>Arenaria serpyllifolia</i> L.	a-b	Th	Eur-As	SCC
<i>Cerastium arvense</i> L.	p	H	Boreal	SBC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Cerastium dubium</i> (Bastard) Guepin	a	Th	Eur	MtC
<i>Cerastium fontanum</i> Baumg. <sup>1</sup>	p	H	Eur	SBC
<i>Cerastium glomeratum</i> Thuill.	a	Th	Kos	SCC
<i>Cerastium pumilum</i> Curtis	a	Th	Eur-Med	SCC
<i>Corrigiola litoralis</i> L.	a-b	Th	subMed	SCC
<i>Cucubalus baccifer</i> L.	p	H	Eur-As	NCC
<i>Dianthus armeria</i> L.	a-b	Th	Eur	MtC
<i>Dianthus giganteus</i> D'Urv.	p	H	subMed	MtC
<i>Dianthus moesiacus</i> Vis. & Pančić	p	H	Bal	MtC
<i>Dianthus pinifolius</i> Sm. <sup>1</sup>	p	H	Bal-Dac	MtC
<i>Gypsophila muralis</i> L.	a	Th	Eur-As	MedC
<i>Herniaria glabra</i> L.	b	H	Eur-As	NCC
<i>Herniaria hirsuta</i> L.	p	H	Eur-As	SCC
<i>Herniaria incana</i> Lam.	p	H	Eur-Med	SCC
<i>Holosteum umbellatum</i> L.	a	Th	Eur-As	SCC
<i>Lychnis coronaria</i> (L.) Desr.	p	H	Med-OT	MtC
<i>Lychnis flos-cuculi</i> L.	p	H	Eur-Sib	SBC
<i>Minuartia anatolica</i> (Boiss.) Woronow	p	H	Bal-Anat	SCC
<i>Minuartia bosniaca</i> (Beck) K. Maly	p	H	Bal	MtC
<i>Minuartia caespitosa</i> (Ehrh.) Degen	p	H	Eur-Med	SBC
<i>Minuartia glomerata</i> (M. Bieb.) Degen	b	Th	Eur-Med	NCC
<i>Minuartia hirsuta</i> (M. Bieb.) Hand-Mazz	p	H	subMed	MtC
<i>Minuartia montana</i> L.	a	Th	subMed	SCC
<i>Minuartia rhodopaea</i> (Degen) Kozuharov & Kuzmanov	p	Ch	Bal	MtC
<i>Minuartia viscosa</i> (Schreb.) Schinz & Thell.	a	Th	Eur-Med	SCC
<i>Moehringia trinervia</i> (L.) Clairv.	a	Th	Eur-As	SBC
<i>Moenchia mantica</i> (L.) Bartl.	a	Th	Eur-Med	MtC
<i>Myosoton aquaticum</i> (L.) Moench	p	H	Eur-As	NCC
<i>Paronychia cephalotes</i> (M. Bieb.) Besser	p	H	Pont	NCC
<i>Petrorhagia illyrica</i> (Ard.) P.W. Ball & Heywood	p	H	Pont-Med	MedC
<i>Petrorhagia prolifera</i> (L.) P.W. Ball & Heywood	a	Th	Pont-Med	MedC
<i>Sagina procumbens</i> L.	p	H	Boreal	SBC
<i>Saponaria glutinosa</i> M. Bieb.	a-b	H	subMed	MtC
<i>Saponaria officinalis</i> L.	p	H	Eur-Sib	NCC
<i>Scleranthus annuus</i> L.	a-b	Th	Eur-Sib	SCC
<i>Scleranthus dichotomus</i> Schur	p	H	subMed	MtC
<i>Scleranthus perennis</i> L.	p	H	Eur-Med	NCC
<i>Scleranthus polycarpus</i> L.	a-b	H	subMed	SCC
<i>Silene alba</i> (Mill.) E.H.L. Krause	a	Th	Eur-Sib	NCC
<i>Silene armeria</i> L.	a-b	Th	Eur	MtC



Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Silene bupleuroides</i> L.	p	H	Pont-subMed	NCC
<i>Silene compacta</i> Fisch. <sup>2</sup>	p	H	Med	SCC
<i>Silene conica</i> L.	a	Th	subMed-As	MedC
<i>Silene dichotoma</i> Ehrh.	a	Th	Eur-Med	SCC
<i>Silene flavescens</i> Waldst. & Kit. <sup>1</sup>	p	H	Carp-Bal	MtC
<i>Silene frivaldskyana</i> Hampe	p	H	Bal	MedC
<i>Silene gigantea</i> L.	b	H	Bal	MedC
<i>Silene italica</i> (L.) Pers.	p	H	Eur-Med	MtC
<i>Silene noctiflora</i> L.	a	Th	Eur-Sib	NCC
<i>Silene otites</i> (L.) Wibel	p	H	Eur-Med	NCC
<i>Silene roemerii</i> Friv. <sup>1</sup>	p	Ch	Bal	MtC
<i>Silene subconica</i> Friv.	a	Th	subMed	SCC
<i>Silene viridiflora</i> L.	p	H	Med	MtC
<i>Silene vulgaris</i> (Moench) Garcke	a	Th	Eur-As	MtC
<i>Spergula arvensis</i> L.	a	Th	Kos	SCC
<i>Spergula pentandra</i> L. <sup>1</sup>	a	Th	subMed	SCC
<i>Spergularia rubra</i> (L.) J. & C. Presl	a	Th	subBoreal	SCC
<i>Stellaria alsine</i> Grimm	p	H	Boreal	SBC
<i>Stellaria graminea</i> L.	p	H	Eur-As	SBC
<i>Stellaria holostea</i> L.	p	H	Eur-Sib	MtC
<i>Stellaria media</i> (L.) Vill.	a-b	Th	Kos	SCC
<i>Stellaria pallida</i> (Dumort.) Piré	a-b	Th	subMed-CAs	SCC
<i>Vaccaria hispanica</i> (Mill.) Rauschert	a	Th	Kos	SCC
<i>Velezia rigida</i> L.	a	Th	subMed	SCC
<i>Viscaria vulgaris</i> Rohl.	p	H	Eur-Sib	NCC
<b>Celastraceae</b>				
<i>Euonymus europaeus</i> L.	sh	Ph	Eur-As	SBC
<i>Euonymus latifolius</i> (L.) Mill.	sh-tr	Ph	Eur-Med	MtC
<i>Euonymus verrucosus</i> Scop.	sh-tr	Ph	Eur-Med	MtC
<b>Chenopodiaceae</b>				
<i>Atriplex hastata</i> L.	a	Th	Boreal	SCC
<i>Atriplex nitens</i> Schkuhr.	a	Th	Eur-As	SCC
<i>Atriplex oblongifolia</i> Waldst. & Kit.	a	Th	Eur-As	NCC
<i>Atriplex patula</i> L.	a	Th	Boreal	SCC
<i>Atriplex rosea</i> L.	a	Th	Eur-As	SCC
<i>Atriplex tatarica</i> L.	a	Th	Eur-As	SCC
<i>Chenopodium album</i> L.	a	Th	Kos	SCC
<i>Chenopodium bonus-henricus</i> L. <sup>2</sup>	p	H	Alp-Med	SCC
<i>Chenopodium botrys</i> L.	a	Th	Boreal	SCC
<i>Chenopodium ficifolium</i> Sm.	a	Th	Eur-As	SCC
<i>Chenopodium glaucum</i> L.	a	Th	Eur-As	SCC
<i>Chenopodium hybridum</i> L.	a	Th	Boreal	SCC
<i>Chenopodium murale</i> L.	a	Th	Kos	SCC
<i>Chenopodium opulifolium</i> Koch & Ziz.	a	Th	Med-CAs	SCC
<i>Chenopodium polyspermum</i> L.	a	Th	Eur-Sib	NCC
<i>Chenopodium rubrum</i> L.	a	Th	subBoreal	SCC
<i>Chenopodium urbicum</i> L.	a	Th	Eur-As	SCC
<i>Chenopodium virgatum</i> L.	a	Th	Eur	SCC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Chenopodium vulvaria</i> L.	a	Th	Eur-As	SCC
<i>Kochia scoparia</i> (L.) Schrad.	a	Th	Adv	NCC
<i>Polycnemum arvense</i> L.	a	Th	Eur-Sib	SCC
<i>Polycnemum majus</i> A. Braun	a	Th	Eur-As	SCC
<b>Cistaceae</b>				
<i>Fumana procumbens</i> (Dunal) Gren. & Godr.	sh	Ch	Pont-Med	MtC
<i>Helianthemum nummularium</i> (L.) Mill.	ssh	Ch	Alp-Med	MtC
<i>Helianthemum salicifolium</i> (L.) Mill.	a	Th	subMed	SCC
<i>Rhodax canus</i> (L.) Fuss	ssh	Ch	Pont	MtC
<i>Tuberaria guttata</i> (L.) Fourr. <sup>1</sup>	a	Th	subMed	MedC
<b>Convolvulaceae</b>				
<i>Calystegia sepium</i> (L.) R. Br.	p	H	Kos	NCC
<i>Calystegia sylvatica</i> (Kit.) Griseb.	p	H	Med	MtC
<i>Convolvulus arvensis</i> L.	p	H	Kos	SCC
<i>Convolvulus cantabrica</i> L.	p	Ch	subMed	MedC
<b>Cornaceae</b>				
<i>Cornus mas</i> L.	sh	Ph	subMed	MtC
<i>Cornus sanguinea</i> L.	sh	Ph	subMed	MtC
<b>Coryllaceae</b>				
<i>Carpinus betulus</i> L.	tr	Ph	Eur-subMed	MtC
<i>Carpinus orientalis</i> Mill.	tr-sh	Ph	subMed	MtC
<i>Corylus avellana</i> L.	sh-tr	Ph	Med-CAs	SBC
<i>Corylus colurna</i> L.	tr	Ph	Pont-CAs	MtC
<i>Ostrya carpinifolia</i> Scop.	tr	Ph	subMed	MtC
<b>Crassulaceae</b>				
<i>Sedum acre</i> L.	p	Ch	Eur-Med	SBC
<i>Sedum aetnense</i> Tineo	a	Th	Pont-Med	MtC
<i>Sedum album</i> L.	p	H	subMed	MtC
<i>Sedum annuum</i> L. <sup>1</sup>	a	Th	Eur-Sib	SBC
<i>Sedum cepaea</i> L.	a-b	Th	subMed	MtC
<i>Sedum hispanicum</i> L.	a-p	Th	Eur-Med	SCC
<i>Sedum kostovii</i> Stef.	p	H	Bul	MtC
<i>Sedum maximum</i> (L.) Suter	p	H	subBoreal	SBC
<i>Sedum rubens</i> L.	a	Th	Eur-Med	MedC
<i>Sedum tenuifolium</i> (Sm.) Strobl	p	H	subMed	MtC
<i>Sempervivum leucanthum</i> Pančić <sup>1</sup>	p	Ch	Bul	
<i>Umbilicus erectus</i> DC. <sup>1</sup>	p	H	Med	MtC
<i>Umbilicus rupestris</i> (Salisb.) Dandy	p	H	subMed	MtC
<b>Cucurbitaceae</b>				
<i>Bryonia alba</i> L.	p	H	Eur-OT	SCC
<b>Cuscutaceae</b>				
<i>Cuscuta campestris</i> Yunck.	a	Th	NAm(Adv)	Adv
<i>Cuscuta epithimum</i> (L.) L.	a	Th	Eur	SCC
<i>Cuscuta europaea</i> L.	a	Th	subBoreal	SCC
<i>Cuscuta monogyna</i> Vahl.	a	Th	Eur-As	SCC
<i>Cuscuta planiflora</i> Ten.	a	Th	Med	SCC
<b>Dioscoreaceae</b>				
<i>Tamus communis</i> L.	p	G	subMed	MedC

Table 1. Floristic list – continuation.

1	2	3	4	5
<b>Dipsacaceae</b>				
<i>Cephalaria laevigata</i> (Waldst. & Kit.) Schrad.	p	H	subMed	NCC
<i>Cephalaria transsylvanica</i> (L.) Roem. & Schult.	a	Th	Pont-Med	SCC
<i>Dipsacus fullonum</i> L.	b	H	Eur-OT	SCC
<i>Dipsacus laciniatus</i> L.	b	H	Eur-Med	SCC
<i>Knautia ambigua</i> (Friv.) Boiss. & Orph.	p	H	Bal	MtC
<i>Knautia arvensis</i> (L.) Coult.	p	H	Eur-Sib	SBC
<i>Knautia integrifolia</i> (L.) Bertol.	a	Th	Med	SCC
<i>Knautia macedonica</i> Griseb.	p	H	Bal	MtC
<i>Pterocephalus plumosus</i> (L.) Coult. <sup>2</sup>	a	Th	Med	SCC
<i>Scabiosa divaricata</i> Jacq. <sup>2</sup>	a	Th	Med	SCC
<i>Scabiosa ochroleuca</i> L.	p	H	Eur-Sib	NCC
<i>Scabiosa rotata</i> M. Bieb.	a	Th	Med	SCC
<i>Scabiosa triniifolia</i> L.	b	Th	Bal	MtC
<i>Tremastelma palaestinum</i> (L.) Janch.	a	Th	Med	MedC
<b>Euphorbiaceae</b>				
<i>Euphorbia amygdaloides</i> L.	p	Ch	Eur	MtC
<i>Euphorbia cyparissias</i> L.	p	H	Eur	NCC
<i>Euphorbia helioscopia</i> L.	a	Th	Eur-As	SCC
<i>Euphorbia myrsinites</i> L. <sup>1</sup>	p	H	subMed	MedC
<i>Euphorbia nicaeensis</i> All.	p	H	Eur-Med	NCC
<i>Euphorbia niciana</i> Novák	p	H	Med	NCC
<i>Euphorbia plathyphyllos</i> L.	a	Th	Eur-Med	MedC
<i>Euphorbia salicifolia</i> Host	p	H	subMed	NCC
<i>Euphorbia serrulata</i> Thuill.	a	Th	subMed-As	SCC
<i>Euphorbia velenovskyi</i> Bornm.	p	H	Bal	MtC
<i>Mercurialis annua</i> L.	a	Th	subMed	SCC
<i>Mercurialis ovata</i> Sternb. & Hoppe	p	H	subMed	MtC
<b>Fabaceae</b>				
<i>Amorpha fruticosa</i> L. <sup>1</sup>	sh	Ph	Adv	Adv
<i>Anthyllis vulneraria</i> L.	a	Th	Eur-Med	MtC
<i>Astragalus cicer</i> L.	p	H	Eur-Sib	NCC
<i>Astragalus glycyphyllos</i> L.	p	H	sPont	SBC
<i>Astragalus hamosus</i> L.	a	Th	Eur-As	MedC
<i>Astragalus monspessulanus</i> L. <sup>1</sup>	p	H	Pont-Med	MtC
<i>Astragalus onobrychis</i> L.	p	H	Eur-As	NCC
<i>Bituminaria bituminosa</i> (L.) C.H. Stirt.	p	H	Pont-Med	SCC
<i>Chamaecytisus absinthioides</i> (Janka) Kuzmanov <sup>1</sup>	sh	Ch	Bal	MtC
<i>Chamaecytisus albus</i> (Hack.) Rothm.	sh	Ch	Eur	MtC
<i>Chamaecytisus ciliatus</i> (Wahlenb.) Rothm.	sh	Ph	Pont-Med	MtC
<i>Chamaecytisus glaber</i> (L. f.) Rothm.	sh	Ch	Bal-Dac	MtC
<i>Chamaecytisus hirsutus</i> (L.) Link	sh	Ch	Eur-Sib	MtC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Chamaecytisus rochelii</i> (Wierzb.) Rothm.	sh	Ch	Pont-Med	MtC
<i>Chamaecytisus supinus</i> (L.) Link	sh	Ch	Eur-Med	MtC
<i>Chamaespartium sagittale</i> (L.) P.E. Gibbs	sh	Ch	subMed	MtC
<i>Colutea arborescens</i> L.	sh	Ph	subMed	MedC
<i>Coronilla cretica</i> L.	a	Th	Med	MedC
<i>Coronilla emerus</i> L.	sh	Ph	subMed	MedC
<i>Coronilla scorpioides</i> L. <sup>1</sup>	a	Th	subMed	SCC
<i>Coronilla varia</i> L.	p	H	Eur-Med	MtC
<i>Dorycnium herbaceum</i> Vill.	p	Ch	Eur-Med	MtC
<i>Galega officinalis</i> L.	p	H	Pont-Med	SCC
<i>Genista carinalis</i> Griseb. <sup>1</sup>	sh	Ch	Bal-Anat	MtC
<i>Genista ovata</i> Waldst. & Kit.	sh	Ch	Eur	MtC
<i>Genista rumelica</i> Velen.	sh	Ch	Bal	MtC
<i>Genista tinctoria</i> L.	sh	Ch	Eur-Sib	NCC
<i>Hippocrepis comosa</i> L. <sup>3</sup>	p	H	subMed	MtC
<i>Lathyrus aphaca</i> L.	a	Th	subBoreal	SCC
<i>Lathyrus cicera</i> L.	a	Th	subMed	SCC
<i>Lathyrus hirsutus</i> L.	a	Th	Eur-Med	SCC
<i>Lathyrus latifolius</i> L.	p	H	Eur-Med	SCC
<i>Lathyrus laxiflorus</i> (Desf.) Kuntze	p	H	subMed	MtC
<i>Lathyrus niger</i> (L.) Bernh.	p	H	Eur-Med	MtC
<i>Lathyrus nissolia</i> L.	a	Th	Eur-subMed	MtC
<i>Lathyrus pratensis</i> L.	p	H	subBoreal	SBC
<i>Lathyrus sativus</i> L.	a	Th	subMed	SCC
<i>Lathyrus sphaericus</i> Retz.	a	Th	Eur-As	MedC
<i>Lathyrus sylvestris</i> L.	p	H	Eur-subMed	NCC
<i>Lathyrus tuberosus</i> L.	p	H	Eur-As	NCC
<i>Lathyrus venetus</i> (Mill.) Wohlf. <sup>1</sup>	p	H	Eur-Med	MtC
<i>Lathyrus vernus</i> Bernh.	p	H	Eur-Sib	SBC
<i>Lens nigricans</i> (M. Bieb.) Godr.	a	Th	Pont-Med	SCC
<i>Lotus aegaeus</i> (Griseb.) Boiss. <sup>1</sup>	p	H	Med	MtC
<i>Lotus corniculatus</i> L.	p	H	Eur-Med	SCC
<i>Lotus tenuis</i> Waldst. & Kit.	p	H	Eur-CAs	SCC
<i>Lupinus angustifolius</i> L.	a	Th	Med	MedC
<i>Medicago arabica</i> (L.) Huds.	a	Th	Eur-Med	SCC
<i>Medicago constricta</i> Durieu	a	Th	Med	MedC
<i>Medicago falcata</i> L.	p	H	Eur-As	NCC
<i>Medicago lupulina</i> L.	a-b	Th	Eur-As	SCC
<i>Medicago minima</i> (L.) Bartal.	a	Th	Eur-As	SCC
<i>Medicago orbicularis</i> All.	a	Th	Eur-Med	SCC
<i>Medicago polymorpha</i> L. <sup>3</sup>	a	Th	Kos	SCC
<i>Medicago rigidula</i> (L.) All.	a	Th	Eur-Med	SCC
<i>Medicago sativa</i> L.	p	H	CAs (Adv)	Adv
<i>Melilotus alba</i> Medik.	a	Th	subBoreal	SCC
<i>Melilotus officinalis</i> (L.) Pall.	a	Th	Eur-As	SCC
<i>Onobrychis alba</i> (Waldst. & Kit.) Desv.	p	H	subMed	MtC
<i>Onobrychis arenaria</i> (Kit.) DC.	p	Ch	sPont	NCC
<i>Onobrychis caput-galii</i> (L.) Lam. <sup>1</sup>	a	Th	subMed	MedC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Onobrychis degenii</i> Dörf.	p	H	Bal	MtC
<i>Onobrychis gracilis</i> Besser	p	H	Pont-Med	SCC
<i>Onobrychis lasiostachya</i> Boiss.	p	H	Bal-Anat	NCC
<i>Ononis arvensis</i> L.	p	H	Eur-As	NCC
<i>Ornithopus compressus</i> L. <sup>3</sup>	a	Th	subMed	MedC
<i>Pisum elatius</i> M. Bieb.	a	Th	Eur	MtC
<i>Pisum sativum</i> L.	a	Th	Eur	SCC
<i>Robinia pseudoacacia</i> L.	sh-tr	Ph	NAm(Adv)	Adv
<i>Trifolium alpestre</i> L.	p	H	Eur-Sib	NCC
<i>Trifolium angustifolium</i> L.	a	Th	Med	MedC
<i>Trifolium arvense</i> L.	a	Th	Eur-Sib	SCC
<i>Trifolium aureum</i> Pollich	a	Th	Eur-Sib	SCC
<i>Trifolium campestre</i> Schreb	a	Th	Eur-Med	MtC
<i>Trifolium cherleri</i> L.	a	Th	Med	MedC
<i>Trifolium dubium</i> Sibth.	a	Th	Eur-Med	MedC
<i>Trifolium echinatum</i> M. Bieb.	a	Th	Med	SCC
<i>Trifolium fragiferum</i> L.	p	H	Eur-As	SCC
<i>Trifolium glomeratum</i> L.	a	Th	subMed	MedC
<i>Trifolium hirtum</i> All.	a	Th	Med	MedC
<i>Trifolium hybridum</i> L.	p	H	Eur-Med	MedC
<i>Trifolium incarnatum</i> L.	a-b	Th	subMed	MtC
<i>Trifolium lappaceum</i> L.	a	Th	Med	MedC
<i>Trifolium micranthum</i> Viv.	a	Th	Eur-Med	MedC
<i>Trifolium ochroleucon</i> Huds.	p	H	Eur	MtC
<i>Trifolium pallidum</i> Waldst. & Kit.	a-b	Th	subMed	MtC
<i>Trifolium pannonicum</i> Jacq.	p	H	subMed	MtC
<i>Trifolium patens</i> Schreb.	a	Th	subMed	MedC
<i>Trifolium pratense</i> L.	p	H	SBoreal	NCC
<i>Trifolium purpureum</i> Loisel.	a	Th	Med	MedC
<i>Trifolium repens</i> L.	p	H	Eur-Sib	SCC
<i>Trifolium resupinatum</i> L.	a	Th	Med	SCC
<i>Trifolium scabrum</i> L.	a	Th	Med-As	MedC
<i>Trifolium setiferum</i> Boiss.	a	Th	Med	MedC
<i>Trifolium smyrnaeum</i> Boiss.	a	Th	Med	MedC
<i>Trifolium striatum</i> L.	a	Th	Eur-Med	MtC
<i>Trifolium subterraneum</i> L.	a	Th	subMed	MedC
<i>Trifolium tenuifolium</i> Ten.	a	Th	Med	MedC
<i>Trifolium trichopterum</i> Pančić	a	Th	Bal	MtC
<i>Trigonella coerulea</i> (L.) Ser.	a	Th	Eur-Med	NCC
<i>Trigonella monspeliaca</i> L.	a	Th	subMed	SCC
<i>Trigonella procumbens</i> (Besser) Rchb.	a	Th	Pont-Med	SCC
<i>Vicia angustifolia</i> L.	a	Th	Eur-As	SCC
<i>Vicia cassubica</i> L.	p	H	Eur-Med	MtC
<i>Vicia cordata</i> Wulfen	a	Th	Med	SCC
<i>Vicia cracca</i> L.	p	H	Euro-As	SBC
<i>Vicia dalmatica</i> A. Kern.	p	H	subMed	MtC
<i>Vicia grandiflora</i> Scop.	a-b	Th	subMed	MtC
<i>Vicia hirsuta</i> (L.) Gray	a	Th	Eur-Med	NCC
<i>Vicia lathyroides</i> L.	a	Th	Eur-Med	MedC
<i>Vicia narbonensis</i> L.	a-b	Th	Eur-As	SCC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Vicia pannonica</i> Crantz	a	Th	Eur-Med	SCC
<i>Vicia peregrina</i> L.	a	Th	Eur-As	SCC
<i>Vicia sativa</i> L.	a	Th	Eur-Med	SCC
<i>Vicia serratifolia</i> Jacq.	a	Th	Pont-Med	SCC
<i>Vicia tenuifolia</i> Roth	p	H	Eur-As	NCC
<i>Vicia tetrasperma</i> (L.) Schreb.	a	Th	Eur-Med	NCC
<i>Vicia varia</i> Host	a	Th	Eur-Med	SCC
<i>Vicia villosa</i> Roth	a	Th	Eur-CAs	SCC
<b>Fagaceae</b>				
<i>Castanea sativa</i> Mill. <sup>1</sup>	tr	Ph	Med	MtC
<i>Fagus sylvatica</i> L.	tr	Ph	Eur	MtC
<i>Quercus brachyphylla</i> Kotschy	sh-tr	Ph	Med	MedC
<i>Quercus cerris</i> L.	tr	Ph	Eur-subMed	MtC
<i>Quercus coccifera</i> L.	sh-tr	Ph	Med	MedC
<i>Quercus dalechampii</i> Ten.	tr	Ph	subMed	MtC
<i>Quercus frainetto</i> Ten.	tr	Ph	Eur	MtC
<i>Quercus longipes</i> Steven	tr	Ph	Pont-Eux	
<i>Quercus pedunculiflora</i> C. Koch	tr	Ph	Pont-Med	MtC
<i>Quercus polycarpa</i> Schur	tr	Ph	subMed	MtC
<i>Quercus pubescens</i> Willd.	sh-tr	Ph	Eur-subMed	MedC
<i>Quercus virgiliana</i> (Ten.) Ten.	sh-tr	Ph	subMed	MtC
<b>Gentianaceae</b>				
<i>Centaurium erythraea</i> Raf.	a	Th	subMed	SCC
<i>Centaurium pulchellum</i> (Sw.) Druce	a	Th	Eur-As	NCC
<i>Centaurium turcicum</i> (Velen.) Fritsch	a	Th	subMed	SCC
<b>Geraniaceae</b>				
<i>Erodium ciconium</i> (L.) L'Her.	a	Th	subMed	SCC
<i>Erodium cicutarium</i> (L.) L'Her.	a	Th	subBoreal	SCC
<i>Geranium columbinum</i> L.	a	Th	subMed	SCC
<i>Geranium dissectum</i> L.	a	Th	Eur-As	SCC
<i>Geranium lucidum</i> L.	a	Th	Eur-As	MtC
<i>Geranium molle</i> L.	a-b	Th	Eur-Med	SCC
<i>Geranium pusillum</i> L.	a-b	Th	Eur-Med	SCC
<i>Geranium pyrenaicum</i> Burm. f.	p	H	subMed	MtC
<i>Geranium robertianum</i> L.	a-b	Th	subBoreal	SBC
<i>Geranium rotundifolium</i> L.	a	Th	Eur-As	SCC
<i>Geranium sanguineum</i> L.	p	H	Eur	MtC
<b>Globulariaceae</b>				
<i>Globularia aphyllanthes</i> Crantz <sup>1</sup>	p	H	Eur	NCC
<b>Haloragaceae</b>				
<i>Myriophyllum spicatum</i> L.	p	H	Boreal	SBC
<b>Hypericaceae</b>				
<i>Hypericum cerastoides</i> (Spach) N. Robson	p	H	subMed	MedC
<i>Hypericum maculatum</i> Crantz	p	H	Boreal	SBC
<i>Hypericum montbretii</i> Spach <sup>1</sup>	p	H	subMed	MedC
<i>Hypericum olympicum</i> L.	p	H	subMed	MedC
<i>Hypericum perforatum</i> L.	p	H	Kos	SCC
<i>Hypericum rumeliacum</i> Boiss. <sup>1</sup>	p	H	Bal	MtC
<i>Hypericum tetrapterum</i> Fr.	p	H	Eur-Sib	SCC

Table 1. Floristic list – continuation.

1	2	3	4	5
<b>Juglandaceae</b>				
<i>Juglans regia</i> L.	tr	Ph	Eur-As	MtC
<b>Lamiaceae</b>				
<i>Acinos alpinus</i> (L.) Moench	p	H	Alp-Carp	MtC
<i>Acinos arvensis</i> (Lam.) Dandy	a	Th	Eur-Med	MtC
<i>Acinos suaveolens</i> (Sm.) Don	p	H	subMed	MedC
<i>Ajuga chamaeopytis</i> (L.) Schreb.	p	H	Pont-Med	SCC
<i>Ajuga genevensis</i> L.	p	H	sPont	NCC
<i>Ajuga laxmanii</i> (L.) Benth.	p	H	sSib	MtC
<i>Ajuga reptans</i> L.	p	H	Eur-Med	MtC
<i>Ballota nigra</i> L.	p	H	Eur-Med	SCC
<i>Betonica officinalis</i> L.	p	H	subMed	NCC
<i>Calamintha nepeta</i> (L.) Savi	p	H	Eur-Med	MtC
<i>Calamintha sylvatica</i> Bromf.	p	H	Eur-OT	MtC
<i>Clinopodium vulgare</i> L.	p	H	subBoreal	MtC
<i>Galeopsis bifida</i> Boenn.	a	Th	Eur-As	NCC
<i>Galeopsis ladanum</i> L.	a	Th	Eur-As	SCC
<i>Galeopsis speciosa</i> Mill.	a	Th	Eur-As	SBC
<i>Galeopsis tetrahit</i> L.	a	Th	Eur-As	NCC
<i>Glechoma hederacea</i> L.	p	H	Eur-As	SBC
<i>Glechoma hirsuta</i> Waldst. & Kit.	p	H	Eur-Med	MtC
<i>Lamium amplexicaule</i> L.	a	Th	Eur-As	SCC
<i>Lamium galeobdolon</i> (L.) L.	p	H	Med	MtC
<i>Lamium maculatum</i> L.	p	H	subBoreal	MtC
<i>Lamium purpureum</i> L.	a	Th	Eur-Med	SCC
<i>Leonurus cardiaca</i> L.	a	Th	Eur-As	SCC
<i>Leonurus marrubiastrum</i> L.	b	H	Eur-As	NCC
<i>Lycopus europaeus</i> L.	p	H	Eur-As	SBC
<i>Lycopus exaltatus</i> L. f.	p	H	Eur-As	NCC
<i>Marrubium peregrinum</i> L.	p	H	subMed	NCC
<i>Marrubium vulgare</i> L.	p	H	Eur-As	SCC
<i>Melissa officinalis</i> L.	p	H	subMed	SCC
<i>Melittis melissophyllum</i> L.	p	H	Eur	MtC
<i>Mentha aquatica</i> L.	p	H	Boreal	NCC
<i>Mentha arvensis</i> L.	p	H	Eur-As	MtC
<i>Mentha longifolia</i> (L.) Huds.	p	H	Eur-Sib	SCC
<i>Mentha pulegium</i> L.	p	H	Eur-As	SCC
<i>Mentha spicata</i> L.	p	H	Eur	SBC
<i>Micromeria dalmatica</i> Benth.	p	H	Bal	MtC
<i>Nepeta cataria</i> L.	p	H	Eur-As	SCC
<i>Nepeta nuda</i> L.	p	H	Eur-As	SCC
<i>Origanum vulgare</i> L.	p	H	Eur-As	MtC
<i>Phlomis tuberosa</i> L.	p	H	Eur-Sib	NCC
<i>Prunella grandiflora</i> (L.) Scholler	p	H	subMed	MtC
<i>Prunella laciniata</i> (L.) L.	p	H	Eur	NCC
<i>Prunella vulgaris</i> L.	p	H	Kos	SBC
<i>Salvia aethiopsis</i> L.	p	H	Eur-As	SCC
<i>Salvia amplexicaulis</i> Lam.	p	H	Bal-Dac	NCC
<i>Salvia glutinosa</i> L.	p	H	Eur-As	MtC
<i>Salvia nemorosa</i> L.	p	H	Eur-OT	NCC
<i>Salvia pratensis</i> L.	p	H	Eur-Med	NCC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Salvia sclarea</i> L.	p	H	Med-As	SCC
<i>Salvia verticillata</i> L.	p	H	subMed	SCC
<i>Salvia virgata</i> Jacq.	p	H	Med-CAs	SCC
<i>Salvia viridis</i> L.	a	Th	Pont-Med	SCC
<i>Satureja cuneifolia</i> Ten. <sup>1</sup>	p	Ch	subMed	SCC
<i>Satureja montana</i> L.	p	Ch	Pont-Med	MtC
<i>Scutellaria altissima</i> L.	p	H	Eur	MtC
<i>Scutellaria columnae</i> All.	p	H	subMed	MtC
<i>Scutellaria galericulata</i> L.	p	H	Boreal	SBC
<i>Scutellaria hastifolia</i> L.	p	H	Eur-Sib	NCC
<i>Scutellaria orientalis</i> L.	p	H	Pont-Med	SCC
<i>Sideritis montana</i> L.	a	Th	subMed	SCC
<i>Stachys angustifolia</i> M. Bieb.	p	H	Pont-Med	SCC
<i>Stachys annua</i> (L.) L.	a	Th	Eur-As	SCC
<i>Stachys germanica</i> L.	p	H	Eur-subMed	NCC
<i>Stachys palustris</i> L.	p	H	Boreal	NCC
<i>Stachys recta</i> L.	p	H	Eur-Med	NCC
<i>Stachys sylvatica</i> L.	p	H	EuroAs	SBC
<i>Teucrium chamaedrys</i> L.	p	Ch	subMed	NCC
<i>Teucrium montanum</i> L.	p	H	subMed	MtC
<i>Teucrium polium</i> L.	p	Ch	Pont-Med	SCC
<i>Teucrium scordium</i> L.	p	H	subMed	NCC
<i>Thymus atticus</i> Čelak.	p	Ch	Bal	MedC
<i>Thymus callieri</i> Velen. <sup>1</sup>	p	H	Pont	MtC
<i>Thymus glabrescens</i> Willd. <sup>1</sup>	p	H	Eur	MtC
<i>Thymus pannonicus</i> All.	p	H	Eur	NCC
<i>Thymus pulegioides</i> L.	p	H	Eur	NCC
<i>Thymus sibthorpii</i> Benth.	p	Ch	Bal-Dac	MtC
<i>Thymus striatus</i> Vahl.	p	H	subMed	MtC
<i>Ziziphora capitata</i> L.	a	Th	Med	SCC
<b>Lemnaceae</b>				
<i>Lemna minor</i> L.	p	H	Kos	SCC
<i>Lemna trisulca</i> L.	p	H	Kos	SCC
<i>Spirodela polyrhiza</i> (L.) Schleid	p	H	Kos	SCC
<b>Lentibulariaceae</b>				
<i>Utricularia vulgaris</i> L.	p	H	subBoreal	NCC
<b>Linaceae</b>				
<i>Linum corymbulosum</i> Rchb. <sup>1</sup>	a	Th	Med	MedC
<i>Linum elegans</i> Boiss.	p	H	Bal	
<i>Linum hirsutum</i> L.	p	H	subMed	NCC
<i>Linum hologynum</i> Rchb. <sup>1</sup>	b-p	H	subMed	MtC
<i>Linum nodiflorum</i> L.	a	Th	Med	MedC
<i>Linum tauricum</i> Willd. <sup>1</sup>	p	H	Pont-Med	NCC
<i>Linum tenuifolium</i> L.	p	H	Pont-Med	NCC
<i>Linum trigynum</i> L.	a	Th	subMed	SCC
<i>Radiola linoides</i> Roth	a	Th	Eur-As	MedC
<b>Loranthaceae</b>				
<i>Arceutobium oxycedri</i> (DC.) M. Bieb.	sh	Ph	subMed-As	MedC
<i>Viscum album</i> L.	sh	Ch	Eur-As	SBC
<b>Lythraceae</b>				
<i>Lythrum salicaria</i> L.	p	H	subBoreal	SCC

Table 1. Floristic list – continuation.

1	2	3	4	5
<b>Malvaceae</b>				
<i>Alcea pallida</i> (Willd.) Waldst.& Kit.	p	H	subMed	NCC
<i>Althaea hirsuta</i> L.	a	Th	Med-As	MedC
<i>Althaea officinalis</i> L.	p	H	Boreal	NCC
<i>Hibiscus trionum</i> L.	b	Th	Kos	SCC
<i>Lavatera thuringiaca</i> L.	p	H	Pont-Sib	NCC
<i>Malva neglecta</i> Wallr.	a	Th	subMed	SCC
<i>Malva pusilla</i> Sm.	a-b	Th	Eur-As	SCC
<i>Malva sylvestris</i> L.	a	Th	Kos	SCC
<b>Najadaceae</b>				
<i>Najas minor</i> All.	a	Th	Paleo (Adv)	NCC
<b>Oleaceae</b>				
<i>Fraxinus ornus</i> L.	tr	Ph	subMed	MtC
<i>Fraxinus pennsylvanica</i> H. Marshall <sup>1</sup>	tr	Ph	NAm(Adv)	Adv
<i>Ligustrum vulgare</i> L.	sh	Ch	subMed	MtC
<b>Onagraceae</b>				
<i>Circaea luteciana</i> L.	p	H	Boreal	SBC
<i>Epilobium angustifolium</i> L.	p	H	subBoreal	SBC
<i>Epilobium hirsutum</i> L.	p	H	Boreal	NCC
<i>Epilobium montanum</i> L.	p	H	Eur-OT	SBC
<i>Epilobium parviflorum</i> Schreb.	p	H	subBoreal	SBC
<i>Epilobium roseum</i> Schreb.	p	H	Eur-Med	SBC
<i>Oenothera biennis</i> L.	a	Th	Am (Adv)	Adv
<b>Orobanchaceae</b>				
<i>Orobanche alba</i> Willd.	a	Th	Eur-Med	NCC
<i>Orobanche gracilis</i> Sm.	a	Th	Eur-Med	MtC
<i>Orobanche minor</i> Sm.	a	Th	Med	MedC
<i>Phelipanche mutelii</i> (F.W. Schultz) Pomel	a	Th	Med-OT	SCC
<i>Phelipanche ramosa</i> (L.) Pomel	a	Th	Eur-Med	SCC
<b>Oxalidaceae</b>				
<i>Oxalis acetosella</i> L.	p	H	subBoreal	SBC
<b>Papaveraceae</b>				
<i>Chelidonium majus</i> L.	p	H	Eur-As	NCC
<i>Corydalis bulbosa</i> (L.) DC.	p	G	Eur-Med	MtC
<i>Corydalis marschalliana</i> (Pall.) Pers.	p	G	subMed	MtC
<i>Corydalis slivenensis</i> Velen.	p	G	subMed	SBC
<i>Corydalis solida</i> (L.) Schwarz	p	G	Eur-MedCAs	SBC
<i>Fumaria officinalis</i> L.	a	Th	Eur-Sib	SCC
<i>Fumaria rostellata</i> Knaf	a	Th	Eur-Med	SCC
<i>Fumaria schleicheri</i> Soy.-Will.	a	Th	Eur-As	SCC
<i>Fumaria vaillantii</i> Loisel.	a	Th	Eur-CAs	SCC
<i>Glaucium corniculatum</i> (L.) Rudolph	a-b	Th	Eur-As	SCC
<i>Hypecoum pendulum</i> L.	a	Th	subMed	SCC
<i>Papaver dubium</i> L.	a	Th	Med	SCC
<i>Papaver laevigatum</i> M. Bieb.	a	Th	subMed	SCC
<i>Papaver rhoeas</i> L.	a	Th	Eur-Sib	SCC
<b>Plantaginaceae</b>				
<i>Plantago altissima</i> L.	p	H	Eur-Sib	NCC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Plantago lanceolata</i> L.	p	H	Kos	SCC
<i>Plantago major</i> L.	p	H	Boreal	SCC
<i>Plantago media</i> L.	p	H	Boreal	NCC
<i>Plantago scabra</i> Moench	a	H	Eur-Sib	NCC
<i>Plantago subulata</i> L. <sup>1</sup>	p	H	Med	MtC
<b>Platanaceae</b>				
<i>Platanus orientalis</i> L.	tr	Ph	Med	SCC
<b>Plumbaginaceae</b>				
<i>Armeria rumelica</i> Boiss.	p	H	Bal	MtC
<i>Plumbago europaea</i> L. <sup>1</sup>	p	H	subMed	SCC
<b>Polygalaceae</b>				
<i>Polygala carniolica</i> A. Kern.	p	H	Bal	MtC
<i>Polygala comosa</i> Schkuhr	p	H	subMed	NCC
<i>Polygala hospita</i> Heuff. <sup>1</sup>	p	H	Pann-Bal	MtC
<i>Polygala major</i> Jacq.	p	H	Eur-Sib	MtC
<i>Polygala rhodopea</i> (Velen.) Janch <sup>1</sup>	p	H	Bal	MtC
<b>Polygonaceae</b>				
<i>Fallopia convolvulus</i> (L.) Dumort.	a	Th	Eur-As	SCC
<i>Fallopia dumetorum</i> (L.) Dumort.	a	Th	Eur-Med	NCC
<i>Persicaria amphibia</i> (L.) Gray	p	H	Kos	NCC
<i>Persicaria hydropiper</i> (L.) Opiz	a	Th	Eur-As	SCC
<i>Persicaria lapathifolia</i> (L.) Gray	a	Th	Boreal	SCC
<i>Persicaria maculata</i> (Raf.) Gray	a	Th	Eur-As	SCC
<i>Persicaria mitis</i> (Schrank) Opiz	a	Th	Eur-Med	SCC
<i>Polygonum arenastrum</i> Boreau	a	Th	Kos	NCC
<i>Polygonum aviculare</i> L.	a	Th	Kos	SCC
<i>Polygonum patulum</i> M. Bieb.	a	Th	Boreal	SCC
<i>Polygonum pulchellum</i> Loisel.	a	Th	subMed	SCC
<i>Polygonum rurivagum</i> Boreau	a	Th	SBoreal	SCC
<i>Rumex acetosa</i> L.	p	H	Boreal	SBC
<i>Rumex acetosella</i> L.	p	H	Eur-subMed	SBC
<i>Rumex conglomeratus</i> Murr.	p	H	Eur-As	SCC
<i>Rumex obtusifolius</i> L.	p	H	Eur-Med	SBC
<i>Rumex patientia</i> L. <sup>2</sup>	p	H	Eur-As	SCC
<i>Rumex pulcher</i> L.	p	H	Eur-As	MedC
<b>Portulacaceae</b>				
<i>Montia fontana</i> L.	a	Th	Kos	SBC
<i>Portulaca oleracea</i> L.	a	Th	Adv	SCC
<b>Potamogetonaceae</b>				
<i>Potamogeton crispus</i> L.	p	H	Kos	NCC
<i>Potamogeton natans</i> L.	p	H	Boreal	NCC
<i>Potamogeton nodosus</i> Poir.	p	H	Boreal	NCC
<b>Primulaceae</b>				
<i>Anagalis arvensis</i> L.	a-b	Th	Kos	SCC
<i>Anagalis minima</i> (L.) Krause	a	Th	Eur	SCC
<i>Androsace elongata</i> L.	a	Th	Eur-Sib	NCC
<i>Androsace maxima</i> L.	a	Th	Eur-As	SCC
<i>Cyclamen hederifolium</i> Aiton	p	G	subMed	MedC
<i>Lysimachia atropurpurea</i> L.	a	Th	Med	MedC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Lysimachia nummularia</i> L.	a-b	H	Eur	MtC
<i>Lysimachia punctata</i> L.	p	H	Pont-Med	MtC
<i>Lysimachia vulgaris</i> L.	p	H	Eur-As	SBC
<i>Primula acaulis</i> (L.) L.	p	H	Eur	MtC
<i>Primula veris</i> L.	p	H	Eur-Med	SBC
<b>Ranunculaceae</b>				
<i>Adonis aestivalis</i> L.	a	Th	Eur-subMed	SCC
<i>Adonis flammea</i> Jack.	a	Th	Eur-subMed	SCC
<i>Anemone ranunculoides</i> L.	p	G	Eur-subMed	SBC
<i>Clematis vitalba</i> L.	p	Ch	Eur	MtC
<i>Consolida ajacis</i> (L.) Schur.	a	Th	subMed	SCC
<i>Consolida regalis</i> Gray	a	Th	Euro-Med	NCC
<i>Delphinium balcanicum</i> Pawl.	a	Th	Bal	MtC
<i>Helleborus odoratus</i> Waldst. & Kit.	p	G	Eur-subMed	MtC
<i>Isopyrum thalictroides</i> L.	p	G	Eur	MtC
<i>Myosurus minimus</i> L.	a	Th	Eur-Sib	SCC
<i>Nigella arvensis</i> L.	a	Th	subMed	MedC
<i>Nigella damascena</i> L.	a	Th	subMed	MedC
<i>Ranunculus acris</i> L.	p	H	Kos	SBC
<i>Ranunculus aquatilis</i> L.	a	Th	Kos	SBC
<i>Ranunculus arvensis</i> L.	a	Th	Eur-Med	SCC
<i>Ranunculus auricomus</i> L.	p	H	Eur-Med	SBC
<i>Ranunculus fallax</i> (Wimm. & Grab.) A. Kern.	p	H	Eur	MtC
<i>Ranunculus ficaria</i> L.	p	H	Eur-Sib	SBC
<i>Ranunculus flammula</i> L.	p	H	Eur-Med	SBC
<i>Ranunculus illyricus</i> L.	p	G	Eur-subMed	SCC
<i>Ranunculus millefoliatus</i> Vahl	p	G	subMed	MtC
<i>Ranunculus nemorosus</i> DC.	p	H	Eur	MtC
<i>Ranunculus penicillatus</i> (Dumort.) Bab.	p	H	Eur	MtC
<i>Ranunculus polyanthemus</i> L.	p	H	Eur-subMed	SBC
<i>Ranunculus repens</i> L.	p	H	subMed	SBC
<i>Ranunculus sardous</i> Crantz	a-b	Th	Eur-Med	MedC
<i>Ranunculus sceleratus</i> L.	a-b	Th	Eur-Med	SCC
<i>Ranunculus serbicus</i> Vis.	p	H	Ap-Bal	
<i>Ranunculus sprunerianus</i> Boiss. 1	p	G	subMed	MtC
<i>Ranunculus trichophyllus</i> Chaix	p	H	Kos	SBC
<i>Thalictrum lucidum</i> L.	p	H	Eur	MtC
<i>Thalictrum minus</i> L.	p	H	Euro-Sib	NCC
<b>Resedaceae</b>				
<i>Reseda lutea</i> L.	a	Th	subBoreal	SCC
<i>Reseda luteola</i> L.	b	Th	Eur-Med	SCC
<b>Rhamnaceae</b>				
<i>Frangula alnus</i> Mill.	sh-tr	Ph	subBoreal	MtC
<i>Frangula rupestris</i> (Scop.) Schur	sh	Ph	Med	SCC
<i>Paliurus spina-christi</i> Mill.	sh	Ph	Eur-As	SCC
<i>Rhamnus catharticus</i> L.	sh	Ph	Eur-As	SBC
<b>Rosaceae</b>				
<i>Agrimonia eupatoria</i> L.	p	H	Eur-Med	SBC
<i>Aphanes arvensis</i> L.	a	Th	Eur	MedC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Aremonia agrimonoides</i> (L.) DC.	p	H	subMed	MtC
<i>Cotoneaster integerrimus</i> Medik.	sh	Ph	Euro-Sib	MtC
<i>Crataegus monogyna</i> Jacq.	sh-tr	Ph	subBoreal	MtC
<i>Filipendula vulgaris</i> Moench	p	H	Eur-Med	NCC
<i>Fragaria moschata</i> Weston	p	H	Eur-Pont	NCC
<i>Fragaria vesca</i> L.	p	H	subBoreal	SBC
<i>Fragaria viridis</i> Weston	p	H	Eur-Sib	SBC
<i>Geum urbanum</i> L.	p	H	subBoreal	SBC
<i>Malus dasycphylla</i> Borkh.	tr	Ph	Pann-Pont	MtC
<i>Malus praecox</i> (Pall.) Borkh.	tr	Ph	Pont-CAs	NCC
<i>Malus sylvestris</i> Mill.	tr	Ph	Eur	MtC
<i>Potentilla argentea</i> L.	p	H	SPont	SBC
<i>Potentilla erecta</i> (L.) Raeusch.	p	H	subBoreal	SBC
<i>Potentilla inclinata</i> Vill.	p	H	Eur-As	NCC
<i>Potentilla laciniosa</i> Nestl. 1	p	H	subMed	MtC
<i>Potentilla micrantha</i> DC.	p	H	Eur-subMed	MtC
<i>Potentilla neglecta</i> Baumg.	p	H	subBoreal	MtC
<i>Potentilla obscura</i> Willd.	p	H	Eur	NCC
<i>Potentilla reptans</i> L.	p	H	Kos	SCC
<i>Potentilla rupestris</i> L.	p	H	Boreal	MtC
<i>Prunus avium</i> L.	tr	Ph	subMed	MtC
<i>Prunus cerasifera</i> Ehrh.	tr	Ph	Eur-As	NCC
<i>Prunus mahaleb</i> L.	tr	Ph	Eur-Med	MtC
<i>Prunus spinosa</i> L.	sh	Ph	sPont	SCC
<i>Pyrus nivalis</i> Jacq.	tr	Ph	Eur-As	NCC
<i>Pyrus pyrastrer</i> Burgsd.	tr	Ph	subMed	MtC
<i>Rosa agrestis</i> Savi	sh	Ph	subMed	MtC
<i>Rosa caesia</i> Sm.	sh	Ph	Eur	MtC
<i>Rosa canina</i> L.	sh	Ph	subMed	SBC
<i>Rosa corymbifera</i> Borkh.	sh	Ph	Eur-As	NCC
<i>Rosa dumalis</i> Bechts.	sh	Ph	Eur-As	NCC
<i>Rosa gallica</i> L.	sh	Ph	Eur-Med	MtC
<i>Rosa micrantha</i> Sm.	sh	Ph	subMed	NCC
<i>Rosa myriacantha</i> Lam. & DC.	sh	Ph	subMed	NCC
<i>Rosa tomentosa</i> Sm.	sh	Ph	subMed	NCC
<i>Rosa vosagiaca</i> Desp.	sh	Ph	subMed	NCC
<i>Rubus caesius</i> L.	sh	Ph	Eur-As	SBC
<i>Rubus canescens</i> DC.	sh	Ph	Eur-Med	MtC
<i>Rubus discolor</i> Weihe & Nees	sh	Ph	subMed	MtC
<i>Rubus idaeus</i> L.	sh	Ph	subBoreal	SBC
<i>Rubus lloydianus</i> Genev.	sh	Ph	Eur	MtC
<i>Rubus thyranthus</i> Focke	sh	Ph	Eur	MtC
<i>Sanguisorba minor</i> Scop.	p	H	subBoreal	SCC
<i>Sorbus aucuparia</i> L.	tr	Ph	subBoreal	SBC
<i>Sorbus domestica</i> L.	tr	Ph	Eur-Med	MtC
<i>Sorbus torminalis</i> (L.) Crantz	tr	Ph	Pont-Med	MtC
<i>Spiraea media</i> F.W. Schmidt	sh	Ph	Pont-Sib	SBC
<b>Rubiaceae</b>				
<i>Asperula aristata</i> L. f.	p	H	subMed	MtC
<i>Asperula arvensis</i> L.	a	Th	Eur-Med	SCC
<i>Asperula cynanchica</i> L.	p	H	Eur-Med	MtC
<i>Asperula purpurea</i> (L.) Ehrend.	p	H	subMed	MtC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Crucianella angustifolia</i> L.	a	Th	Med	MtC
<i>Crucianella graeca</i> Boiss.	a	Th	Bal	MtC
<i>Cruciata laevipes</i> Opiz	p	H	subMed-CAs	SBC
<i>Cruciata pedemontana</i> (Bellardi) Ehrend.	a	Th	Med-CAs	SCC
<i>Galium album</i> Mill.	p	H	Eur-As	NCC
<i>Galium aparine</i> L.	a	Th	Eur-As	SCC
<i>Galium divaricatum</i> Lam.	a	Th	Med	MedC
<i>Galium lovcense</i> Urumov <sup>2</sup>	p	H	Bal-Anat	SCC
<i>Galium mirum</i> Rech. f.	p	Ch	Bal	MtC
<i>Galium palustre</i> L.	p	H	Boreal	SBC
<i>Galium rigidifolium</i> Krendl <sup>2</sup>	p	H	Bal	MtC
<i>Galium rivale</i> (Sm.) Griseb. <sup>2</sup>	p	H	Pont-Sib	
<i>Galium tenuissimum</i> M. Bieb.	a	Th	Pont-CAs	SCC
<i>Galium tricornutum</i> Dandy	a	Th	Eur-As	SCC
<i>Galium verum</i> L.	p	H	Eur-As	NCC
<i>Rubia tinctorium</i> L.	p	H	Med	SCC
<i>Sherardia arvensis</i> L.	a	Th	Med	SCC
<b>Salicaceae</b>				
<i>Populus alba</i> L.	tr	Ph	Eur-As	SCC
<i>Populus canescens</i> (Aiton) Sm.	tr	Ph	Eur-Med	SCC
<i>Populus nigra</i> L.	tr	Ph	Eur-As	MtC
<i>Populus tremula</i> L.	tr	Ph	subBoreal	SBC
<i>Salix alba</i> L.	tr	Ph	Eur-As	SBC
<i>Salix caprea</i> L.	tr	Ph	subBoreal	SBC
<i>Salix cinerea</i> L.	tr	Ph	Eur-As	SBC
<i>Salix fragilis</i> L.	tr	Ph	Eur-As	SBC
<i>Salix purpurea</i> L.	sh	Ph	Eur-Med-CAs	SBC
<i>Salix triandra</i> L.	tr	Ph	subBoreal	SBC
<b>Santalaceae</b>				
<i>Comandra elegans</i> (Rchb.) Rchb.f.	ssh	Ch	Bal-Dac-Anat	MtC
<i>Thesium arvense</i> Horv.	a	Th	Med-CAs	NCC
<i>Thesium bavarum</i> Schrank	p	H	subMed	MtC
<i>Thesium divaricatum</i> Mert. & W.D.J. Koch	p	H	Eur-Med	MedC
<i>Thesium dollineri</i> Murb. <sup>1</sup>	a	Th	Pont	NCC
<i>Thesium simplex</i> Velen.	p	H	Bal-Dac	NCC
<b>Saxifragaceae</b>				
<i>Chrysosplenium alternifolium</i> L.	p	H	subBoreal	SBC
<i>Saxifraga bulbifera</i> L.	p	H	subMed	MtC
<i>Saxifraga rotundifolia</i> L.	p	H	subMed	MtC
<i>Saxifraga tridactylites</i> L.	a	Th	subBoreal	MtC
<b>Scrophulariaceae</b>				
<i>Chaenorhinum minus</i> (L.) Lange	a	Th	Eur-Med	SCC
<i>Digitalis lanata</i> Ehrh.	p	H	subMed	MtC
<i>Digitalis viridiflora</i> Lindl. <sup>1</sup>	p	H	Bal	MtC
<i>Euphrasia picta</i> Wimm.	a	Th	subMed	SCC
<i>Euphrasia rostkoviana</i> Hayne	a	Th	Eur-As	SBC
<i>Euphrasia stricta</i> D. Wolff.	a	Th	Eur-Med	SCC
<i>Gratiola officinalis</i> L.	p	H	Eur-Med	NCC
<i>Kickxia elatine</i> (L.) Dumort.	a	Th	subMed	SCC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Kickxia spuria</i> (L.) Dumort.	a	Th	subMed	SCC
<i>Lathraea squamaria</i> L.	p	G	Eur-As	SBC
<i>Linaria dalmatica</i> (L.) Mill.	p	H	Med	MtC
<i>Linaria genistifolia</i> (L.) Mill.	p	H	Pont-Sib	SCC
<i>Linaria pelisseriana</i> (L.) Mill.	a	Th	Med	MedC
<i>Linaria vulgaris</i> Mill.	p	H	Eur-As	SCC
<i>Melampyrum arvense</i> L.	a	Th	Eur-Med	SCC
<i>Melampyrum cristatum</i> L.	a	Th	Eur-Sib	SBC
<i>Melampyrum scardicum</i> Wettst.	a	Th	Bal	SCC
<i>Misopates orontium</i> (L.) Raf.	a	Th	Eur-Med	SCC
<i>Odontites lutea</i> (L.) Claiv.	a	Th	Eur	NCC
<i>Odontites serotinus</i> Dumort.	a	Th	Eur	NCC
<i>Parentucellia latifolia</i> (L.) Caruel	a	Th	Med	MedC
<i>Scrophularia canina</i> L.	p	H	Eur-Med	SCC
<i>Scrophularia nodosa</i> L.	p	H	subBoreal	NCC
<i>Scrophularia scopoli</i> Pers.	p	H	Eur-Med	MtC
<i>Scrophularia umbrosa</i> Dumort.	p	H	Eur-As	SCC
<i>Verbascum banaticum</i> Schrad.	b	H	Bal-Dac	MtC
<i>Verbascum blattaria</i> L.	b	H	Eur-Sib	SCC
<i>Verbascum chaixii</i> Vill.	p	H	Pann-Bal	MtC
<i>Verbascum densiflorum</i> Bertol.	b	H	subMed	MtC
<i>Verbascum nigrum</i> L.	p	H	Pont-CAs	NCC
<i>Verbascum ovalifolium</i> Sims. <sup>1</sup>	p	H	Pont-Bal	SCC
<i>Verbascum phlomoides</i> L.	b	H	Eur	MtC
<i>Verbascum phoeniceum</i> L.	p	H	Eur-Sib	SCC
<i>Verbascum rorripifolium</i> (Halacsy) I.K. Ferguson	b	Ch	Bal	MtC
<i>Verbascum speciosum</i> Schrad.	b	H	Eur-Med	MtC
<i>Veronica anagalis-aquatica</i> L.	p	H	Boreal	NCC
<i>Veronica arvensis</i> L.	a	Th	Eur-Sib	NCC
<i>Veronica austriaca</i> L.	p	H	Eur-Med	MtC
<i>Veronica barrelieri</i> Roem. & Schult.	p	H	Pont-Bal	NCC
<i>Veronica beccabunga</i> L.	p	H	Eur-As	SCC
<i>Veronica chamaedrys</i> L.	p	H	Eur-As	SBC
<i>Veronica hederifolia</i> L.	a	Th	Eur-Med	SCC
<i>Veronica krumovii</i> (Peev) Peev	p	Ch	Bul	MtC
<i>Veronica officinalis</i> L.	p	H	Eur-Sib	SBC
<i>Veronica orchidea</i> Crantz	p	H	Eur	NCC
<i>Veronica persica</i> Poir.	a	Th	Eur-As	SCC
<i>Veronica polita</i> Fries	a	Th	Eur-As	SCC
<i>Veronica praecox</i> All.	a	Th	Eur-Med	MedC
<i>Veronica prostrata</i> L.	p	H	Eur	NCC
<i>Veronica scardica</i> Griseb.	p	H	Pont-Med	NCC
<i>Veronica scutellata</i> L.	p	H	Eur	SBC
<i>Veronica serpyllifolia</i> L.	a	Th	Boreal	SBC
<i>Veronica teucrium</i> L.	p	H	Eur-Sib	SBC
<i>Veronica triloba</i> (Opiz) A. Kern.	a	Th	subMed	SCC
<i>Veronica triphyllos</i> L.	a	Th	Eur-Med	SCC
<i>Veronica urticifolia</i> Jacq.	p	H	Eur	MtC
<i>Veronica verna</i> L.	a	Th	Eur-Sib	SCC
<i>Veronica vindobonensis</i> (M.A. Fisch.) M.A. Fisch.	p	H	Eur	MtC

Table 1. Floristic list – continuation.

1	2	3	4	5
<b>Selaginellaceae</b>				
<i>Selaginella helvetica</i> (L.) Spring	p	H	subBoreal	MtC
<b>Smilacaceae</b>				
<i>Smilax excelsa</i> L.	p	Ph	subMed	MedC
<b>Solanaceae</b>				
<i>Atropa bella-donna</i> L.	p	H	Eur	MtC
<i>Datura stramonium</i> L.	a	Th	Am (Adv)	Adv
<i>Hyoscyamus niger</i> L.	a-b	Th	Eur-As	SCC
<i>Physalis alkekengii</i> L.	p	H	Eur-As	NCC
<i>Solanum alatum</i> Moench	a	Th	subMed	SCC
<i>Solanum dulcamara</i> L.	p	H	Eur-As	SCC
<i>Solanum luteum</i> Mill.	a	Th	subMed	SCC
<i>Solanum nigrum</i> L.	a	Th	Kos	SCC
<i>Solanum schultesii</i> Opiz	a	Th	Pont	SCC
<b>Sparganiaceae</b>				
<i>Sparganium erectum</i> L.	p	H	Boreal	SBC
<b>Staphyleaceae</b>				
<i>Staphylea pinnata</i> L.	sh	Ph	Eur-Med	MtC
<b>Thymeleaceae</b>				
<i>Thymelaea passerina</i> (L.) Coss. & Germ.	a	Th	Pont	SCC
<b>Tiliaceae</b>				
<i>Tilia cordata</i> Mill.	tr	Ph	Eur	SBC
<i>Tilia pathyphyllos</i> Scop.	tr	Ph	Eur	MtC
<i>Tilia tomentosa</i>	tr	Ph	Eur-Med	MtC
<b>Typhaceae</b>				
<i>Typha angustifolia</i> L.	p	H	Kos	NCC
<i>Typha latifolia</i> L.	p	H	Kos	SBC
<i>Typha schutleworthii</i> Koch & Sond.	p	H	Kos	NCC
<b>Ulmaceae</b>				
<i>Ulmus glabra</i> Huds.	tr	Ph	Eur-Med	SBC
<i>Ulmus minor</i> Mill.	tr	Ph	Eur-Med	SCC
<b>Urticaceae</b>				
<i>Parietaria officinalis</i> L.	p	H	Eur	MedC
<i>Urtica dioica</i> L.	p	H	Boreal	NCC
<i>Urtica urens</i> L.	a	Th	Boreal	SCC
<b>Valerianaceae</b>				
<i>Valerianella carinata</i> Loisel.	a	Th	Eur-Med	SCC
<i>Valerianella coronata</i> (L.) DC.	a	Th	Eur-Med	SCC
<i>Valerianella costata</i> (Steven) Betcke	a	Th	Pont-Med	MtC
<i>Valerianella dentata</i> (L.) Poll.	a	Th	Eur-Med	SCC
<i>Valerianella locusta</i> (L.) Laterr.	a	Th	Eur-Med	MedC
<i>Valerianella microcarpa</i> Loisel.	a	Th	Eur-Med	MedC
<i>Valerianella pumila</i> (L.) Dc.	a	Th	Pont-Med	SCC
<i>Valerianella rimosa</i> Bast.	a	Th	Eur	SCC
<i>Valerianella turgida</i> (Steven) Betcke	a	Th	subMed	MedC
<b>Verbenaceae</b>				
<i>Verbena officinalis</i> Voss.	a-p	Th	Kos	SCC
<b>Violaceae</b>				

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Viola alba</i> Besser	p	H	Eur-Med	MtC
<i>Viola ambigua</i> Waldst. & Kit.	p	H	Eur-Sib	MtC
<i>Viola arvensis</i> Murr.	a	Th	Eur	SCC
<i>Viola jordanii</i> Hanry	p	H	Eur-Med	MtC
<i>Viola kitaibeliana</i> Scult.	a	Th	Eur-Med	SCC
<i>Viola odorata</i> L.	p	H	Eur-Med	MtC
<i>Viola reichenbachiana</i> Boreau	p	H	Eur-As	SBC
<i>Viola riviniana</i> Rchb.	p	H	subMed	MtC
<i>Viola suavis</i> M. Bieb.	p	H	Eur-As	SBC
<i>Viola tricolor</i> L.	a	Th	Eur-As	SCC
<b>Vitaceae</b>				
<i>Vitis sylvestris</i> C.C. Gmel. <sup>1</sup>	sh	Ph	subMed	MedC
<b>Zannichelliaceae</b>				
<i>Zannichellia palustris</i> L.	p	H	Kos	NCC
<b>Liliopsida</b>				
<b>Alliaceae</b>				
<i>Allium carinatum</i> L.	p	G	Pont-Med	MtC
<i>Allium flavum</i> L. <sup>1</sup>	p	G	Med	NCC
<i>Allium guttatum</i> (Steven) Regel	p	G	Pont-Med	MtC
<i>Allium longispathum</i> Redouté	p	G	Eur-Med	NCC
<i>Allium margaritaceum</i> Sm.	p	G	Eur-Med	NCC
<i>Allium moschatum</i> L.	p	G	Pont-subMed	NCC
<i>Allium paczoskianum</i> Tuzson	p	G	Eur-Med	SCC
<i>Allium rotundum</i> L.	p	G	Eur-OT	SCC
<i>Allium scorodoprasum</i> L.	p	G	Eur-Med	SCC
<i>Allium sphaerocephalon</i> L. <sup>1</sup>	p	G	Med	NCC
<i>Allium tenuiflorum</i> Ten.	p	G	Med	NCC
<b>Amaryllidaceae</b>				
<i>Galanthus elwesii</i> Hook. f.	p	G	Eur	MtC
<i>Sternbergia colchiciflora</i> Waldst. & Kit.	p	G	Eur-Pont	MtC
<b>Araceae</b>				
<i>Arum elongatum</i> Steven	p	G	Pont-OT	SCC
<i>Arum maculatum</i> L.	p	G	Eur-subMed	MtC
<b>Cyperaceae</b>				
<i>Bolboschoenus maritimus</i> (L.) Pall.	p	H	Kos	NCC
<i>Carex acuta</i> L.	p	H	Eur-Sib	SBC
<i>Carex acutiformis</i> Ehrh.	p	H	Kos	SBC
<i>Carex bueckii</i> Wimm.	p	H	Eur	MtC
<i>Carex caryophyllea</i> Latourr.	p	H	Boreal	SBC
<i>Carex digitata</i> L.	p	H	Eur-Sib	SBC
<i>Carex distans</i> L.	p	H	Eur-As	NCC
<i>Carex divisa</i> Huds.	p	H	Eur-As	SCC
<i>Carex divulsa</i> Stokes	p	H	Eur-As	SBC
<i>Carex flacca</i> Schreb.	p	H	Kos	SBC
<i>Carex hallerana</i> Asso	p	H	Eur-As	MtC
<i>Carex hirta</i> L.	p	H	Boreal	SBC
<i>Carex liparocarpos</i> Gaudin	p	H	Pont-Med	MtC
<i>Carex melanostachya</i> Willd	p	H	subMed	NCC
<i>Carex michelii</i> Host	p	H	Eur	MtC
<i>Carex montana</i> L.	p	H	Eur-Sib	SBC



Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Carex muricata</i> L.	p	H	Kos	SBC
<i>Carex otrubae</i> Podp.	p	H	Eur	SBC
<i>Carex ovalis</i> Good.	p	H	Kos	SBC
<i>Carex pallescens</i> L.	p	H	Boreal	SBC
<i>Carex panicea</i> L.	p	H	Boreal	SBC
<i>Carex paniculata</i> L.	p	H	subBoreal	SBC
<i>Carex praecox</i> Schreb.	p	H	Eur-Sib	NCC
<i>Carex pseudocyperus</i> L.	p	H	Kos	SBC
<i>Carex remota</i> L.	p	H	Eur-As	SBC
<i>Carex riparia</i> Curtis	p	H	Eur-As	SBC
<i>Carex spicata</i> Huds.	p	H	Eur-As	SBC
<i>Carex sylvatica</i> Huds.	p	H	subMed	SBC
<i>Carex tomentosa</i> L.	p	H	Eur-Sib	MtC
<i>Carex vesicaria</i> L.	p	H	Boreal	SBC
<i>Cyperus difformis</i> L.	a	Th	Kos	SCC
<i>Cyperus fuscus</i> L.	a	Th	Boreal	SCC
<i>Cyperus hamulosus</i> M.Bieb	a	Th	Pont-Sib	NCC
<i>Eleocharis palustris</i> (L.) R. Br.	p	H	Kos	SBC
<i>Fimbristylis bisumbellata</i> (Forssk.) Bubani	a	Th	Kos	SCC
<i>Holoschoenus vulgaris</i> Link	p	Ch	Eur-As	MedC
<i>Isolepis setacea</i> (L.) R. Br.	a	Th	Kos	SCC
<i>Pycneus flavescens</i> (L.) Rchb.	a	Th	Kos	SCC
<i>Pycneus glaber</i> (L.) Hayek	a	Th	Eur-As	SCC
<i>Pycneus longus</i> (L.) Hayek	p	Ch	Kos	SBC
<i>Pycneus serotinus</i> (Rottb.) Hayek	a	Th	Eur-As	SCC
<i>Schoenoplectus lacustris</i> (L.) Palla	p	H	Kos	SBC
<i>Schoenoplectus mucronatus</i> (L.) Palla <sup>2</sup>	p	H	Kos	SBC
<i>Schoenoplectus tabernemontanii</i> (C.C. Gmel.) Palla	p	H	Eur-As	SCC
<i>Scirpus sylvaticus</i> L.	p	H	subBoreal	SBC
<b>Iridaceae</b>				
<i>Crocus biflorus</i> Mill.	p	G	Med	MtC
<i>Crocus chrysanthus</i> (Herbert) Herbert	p	G	Bal-Anat	MedC
<i>Crocus flavus</i> Weston	p	G	Eur-Pont	MtC
<i>Crocus olivieri</i> J. Gay	p	G	Bal	MedC
<i>Crocus pulchellus</i> Herbert	p	G	Bal-Anat	MedC
<i>Gladiolus communis</i> L.	p	G	Med	MtC
<i>Gladiolus illyricus</i> W.D.J. Koch	p	G	Med-OT	MtC
<i>Iris graminea</i> L.	p	H	Pont-Med	MtC
<i>Iris pseudacorus</i> L.	p	H	Eur	MedC
<i>Iris pumila</i> L.	p	H	subMed	NCC
<i>Iris sintenisii</i> Janka	p	H	Med	MtC
<i>Iris suaveolens</i> Boiss. & Reut.	p	H	Bal	MtC
<i>Iris variegata</i> L.	p	H	subMed	MtC
<b>Juncaceae</b>				
<i>Juncus articulatus</i> L.	p	H	Boreal	SCC
<i>Juncus atratus</i> Krock.	p	H	subMed	NCC
<i>Juncus bufonius</i> L.	a	Th	subBoreal	SCC
<i>Juncus compressus</i> Jacq.	p	H	Eur-As	NCC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Juncus conglomeratus</i> L.	p	H	Eur	SBC
<i>Juncus effusus</i> L.	p	H	subBoreal	SBC
<i>Juncus inflexus</i> L.	p	H	subBoreal	SCC
<i>Juncus maritimus</i> Lam. <sup>2</sup>	p	Ch	Kos	MedC
<i>Juncus ranarius</i> Bill <sup>1</sup>	a	Th	Eur	SCC
<i>Juncus tenageia</i> L. f.	a	Th	Eur-Sib	MedC
<i>Juncus tenuis</i> Willd. <sup>1</sup>	p	Ch	NAm(Adv)	Adv
<i>Luzula campestris</i> (L.) Lam. & DC.	p	H	subBoreal	SBC
<i>Luzula forsteri</i> (Sm.) DC.	p	H	Eur	MtC
<i>Luzula luzuloides</i> (Lam.) Dandy	p	H	Eur	MtC
<i>Luzula multiflora</i> (Retz.) Lej.	p	H	Kos	MedC
<i>Luzula pillosa</i> (L.) Willd.	p	H	Boreal	SBC
<b>Juncaginaceae</b>				
<i>Triglochin palustris</i> L.	p	H	Boreal	SBC
<b>Liliaceae</b>				
<i>Anthericum liliago</i> L. <sup>1</sup>	p	H	subMed	MtC
<i>Anthericum ramosum</i> L.	p	H	Eur	NCC
<i>Asphodeline liburnica</i> (Scop.) Rchb.	p	G	Pont-Med	MedC
<i>Colchicum autumnale</i> L.	p	G	Eur	MtC
<i>Convallaria majalis</i> L.	p	G	Boreal	SBC
<i>Erythronium dens-canis</i> L.	p	G	Med	MtC
<i>Fritillaria pontica</i> Wahlenb. <sup>1</sup>	p	G	subMed	MtC
<i>Gagea bohemica</i> (Zauschn.) Schult. & Schult. f	p	G	Eur-Pont	SCC
<i>Gagea minima</i> (L.) Ker Gawl.	p	G	Pont	SCC
<i>Gagea pratensis</i> (Pers.) Dumort.	p	G	Eur	SCC
<i>Gagea pusilla</i> (F.W. Schmidt) Schult. & Schult. f.	p	G	Pont	NCC
<i>Gagea saxatilis</i> (Mert & Koch) Schult. & Schult. f. <sup>1</sup>	p	G	subMed	MtC
<i>Hyacinthella leucophaea</i> (K. Koch) Schur	p	G	Pont-Med	NCC
<i>Lilium martagon</i> L.	p	G	Eur-As	SBC
<i>Muscari botryoides</i> (L.) Mill.	p	G	Med	MtC
<i>Muscari neglectum</i> Ten.	p	G	Med-OT	SCC
<i>Ornithogalum boucheanum</i> Asch.	p	G	Pont-Med	SCC
<i>Ornithogalum comosum</i> L.	p	G	Med	MtC
<i>Ornithogalum kochii</i> Parl.	p	G	Pont-Med	NCC
<i>Ornithogalum montanum</i> Cyr. <sup>1</sup>	p	G	Ap-Bal	MtC
<i>Ornithogalum narbonense</i> L.	p	G	Med	SCC
<i>Ornithogalum nutans</i> L.	p	G	Eur	SCC
<i>Ornithogalum pyrenaicum</i> L.	p	G	Med	MtC
<i>Ornithogalum refractum</i> Schlecht.	p	G	subMed	MtC
<i>Ornithogalum sibthorpii</i> Greuter	p	G	Bal-Anat	MedC
<i>Ornithogalum umbellatum</i> L.	p	G	Pont-subMed	SCC
<i>Polygonatum latifolium</i> (Jacq.) Desf.	p	G	Boreal	MtC
<i>Polygonatum multiflorum</i> (L.) All.	p	G	Boreal	SBC
<i>Polygonatum odoratum</i> (Mill.) Druce	p	G	Eur-Sib	SBC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Scilla autumnalis</i> L.	p	G	Pont-subMed	MedC
<i>Scilla bifolia</i> L.	p	G	Pont-subMed	MtC
<i>Tulipa australis</i> Link	p	G	subMed	MtC
<b>Orchidaceae</b>				
<i>Anacamptis pyramidalis</i> (L.) Rich.	p	G	subMed	MtC
<i>Cephalanthera damasonium</i> (Mill.) Druce	p	H	subMed	MtC
<i>Cephalanthera longifolia</i> (L.) Fritsch	p	H	Eur-OT	MtC
<i>Cephalanthera rubra</i> (L.) Rich.	p	H	Eur-As	MtC
<i>Dactylorhiza romana</i> (Sebast. & Mauri) Soó	p	G	Med-CAs	SBC
<i>Dactylorhiza saccifera</i> (Brongn.) Soó	p	G	Eur-Sib	SBC
<i>Dactylorhiza sambucina</i> (L.) Soó	p	G	Eur	MtC
<i>Himantoglossum caprinum</i> (M. Bieb.) Spreng.	p	G	Med	MedC
<i>Limodorum abortivum</i> (L.) Schwarz	p	G	Med	MedC
<i>Listera ovata</i> (L.) R. Br.	p		Eur-As	SBC
		H		
<i>Neottia nidus-avis</i> (L.) Rich.	p	G	Eur-As	SBC
<i>Ophrys cornuta</i> Steven	p	G	Bal-Anat	MedC
<i>Orchis coriophora</i> L.	p	G	Eur-subMed	MedC
<i>Orchis elegans</i> Heuff.	p	G	Eur-OT	MedC
<i>Orchis morio</i> L.	p	G	Eur-subMed	SBC
<i>Orchis ovalis</i> Mayer	p	G	EEur	MtC
<i>Orchis purpurea</i> Huds.	p	G	subMed	MtC
<i>Orchis simia</i> Lam.	p	G	subMed	MtC
<i>Orchis tridentata</i> Scop.	p	G	Eur-subMed	MedC
<i>Orchis ustulata</i> L.	p	G	Eur-Sib	SBC
<i>Platanthera bifolia</i> (L.) Rich.	p	G	Eur-As	SBC
<i>Platanthera chlorantha</i> (Custer) Rchb.	p	G	Eur-Sib	SBC
<b>Poaceae</b>				
<i>Achnatherum bromoides</i> (L.) P. Beauv. <sup>1</sup>	p	H	subMed	SCC
<i>Aegilops cylindrica</i> Host	a	Th	Eur-As	SCC
<i>Aegilops neglecta</i> Bertol.	a	Th	subMed	SCC
<i>Aegilops triuncialis</i> L.	a	Th	Eur-As	SCC
<i>Agrostis capillaris</i> L.	p	H	Boreal	SBC
<i>Agrostis verticillata</i> Vill.	p	H	Eur-As	SCC
<i>Aira elegantissima</i> Schur	a	Th	Med	MedC
<i>Alopecurus aequalis</i> Sobol.	p	H	Eur-As	SBC
<i>Alopecurus geniculatus</i> L.	a	Th	Eur-As	SCC
<i>Alopecurus myosuroides</i> Huds.	a	Th	Eur-As	SCC
<i>Alopecurus pratensis</i> L.	p	H	Eur-As	SBC
<i>Alopecurus rendlei</i> Eig	a	Th	Med	MedC
<i>Anthoxanthum odoratum</i> L.	p	H	Eur-As	SBC
<i>Apera spica-venti</i> (L.) P. Beauv.	a	Th	subBoreal	MedC
<i>Arrhenatherum elatius</i> (L.) J. & C. Presl	p	H	Eur-As	MtC
<i>Avena fatua</i> L.	a	Th	Boreal	SCC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Avena ludoviciana</i> Durieu	a	Th	Med-CAs	SCC
<i>Avenula pubescens</i> (Huds.) Dumort.	p	H	sSib	SBC
<i>Beckmannia eruciformis</i> (L.) Host	p	H	subBoreal	NCC
<i>Bellardiochloa violacea</i> (Bellardi) Chiov.	p	H	subMed-Anat	SCC
<i>Brachypodium pinnatum</i> (L.) P. Beauv.	p	H	sSib	SBC
<i>Brachypodium sylvaticum</i> (Huds.) P. Beauv.	p	H	Eur-As	SBC
<i>Briza media</i> L.	p	H	Eur	SBC
<i>Bromus arvensis</i> L.	a	Th	Eur-As	SCC
<i>Bromus commutatus</i> Schrad.	a	Th	subMed	MedC
<i>Bromus inermis</i> Leyss.	p	H	Eur-As	SBC
<i>Bromus intermedius</i> Guss. <sup>1</sup>	a	Th	Med-subMed	MedC
<i>Bromus japonicus</i> Thunb.	a-b	Th	Med-CAs	SCC
<i>Bromus madritensis</i> L.	a	Th	Med	SCC
<i>Bromus mollis</i> L.	a	Th	Boreal	MedC
<i>Bromus racemosus</i> L.	a	Th	Eur	SBC
<i>Bromus ramosus</i> Huds.	p	H	subMed-As	SBC
<i>Bromus scoparius</i> L.	a	Th	subMed	SCC
<i>Bromus secalinus</i> L.	a	Th	subBoreal	NCC
<i>Bromus squarrosus</i> L.	a-b	Th	subMed	SCC
<i>Bromus sterilis</i> L.	a-b	Th	Boreal	SCC
<i>Bromus tectorum</i> L.	a	Th	Boreal	SCC
<i>Calamagrostis epigeios</i> (L.) Roth.	p	H	Eur-As	SBC
<i>Catabrosa aquatica</i> (L.) P. Beauv.	p	H	Boreal	SBC
<i>Chrysopogon gryllus</i> (L.) Trin.	p	H	Pont-Med	SCC
<i>Cleistogenes serotina</i> (L.) Keng. <sup>1</sup>	p	H	Eur-subMed	NCC
<i>Crypsis alopecuroides</i> (Piller & Mitterp.) Schrad.	a	Th	Eur-As	SCC
<i>Cynodon dactylon</i> (L.) Pers.	p	H	Kos	SCC
<i>Cynosurus cristatus</i> L.	p	H	Eur	SBC
<i>Cynosurus echinatus</i> L.	a	Th	subMed	MedC
<i>Dactylis glomerata</i> L.	p	H	Eur-As	SBC
<i>Danthonia alpina</i> Vest.	p	H	Eur	MtC
<i>Dasyphyrum villosum</i> (L.) Cand.	a	Th	subMed	MedC
<i>Desmazeria rigida</i> (L.) Tutin	a	Th	subMed	SCC
<i>Dichanthium ischaemum</i> (L.) Roberty	p	H	subMed-As	SCC
<i>Digitaria sanguinalis</i> (L.) Scop.	a	Th	Kos	SCC
<i>Echinaria capitata</i> (L.) Desf. <sup>3</sup>	a	Th	Med	MedC
<i>Echinochloa crus-galli</i> (L.) P. Beauv.	a	Th	Kos	SCC
<i>Elymus elongatus</i> (Host) Runemark <sup>1</sup>	a	H	Pont-subMed	NCC
<i>Elymus hispidus</i> (Opiz) Milderis	p	H	Pont-CAs	MtC
<i>Elymus repens</i> (L.) Gould.	p	H	Boreal	SBC
<i>Eragrostis cilianensis</i> (All.) Vignolo	a	Th	Eur-As	SCC
<i>Eragrostis minor</i> Host	a	Th	subBoreal	SCC
<i>Eragrostis pilosa</i> (L.) P. Beauv.	a	Th	Kos	SCC
<i>Festuca achtarovii</i> Velčev & Vassilev	p	H	Bul	MtC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Festuca arundinacea</i> Schreb.	p	H	Pont-SAs	MtC
<i>Festuca dalmatica</i> (Hack.) K. Richt. <sup>1</sup>	p	H	subMed	SCC
<i>Festuca heterophylla</i> Lam.	p	H	Boreal	MtC
<i>Festuca pratensis</i> L.	p	H	Boreal	SBC
<i>Festuca rupicola</i> Heuff. <sup>1</sup>	p	H	Pann-Bal	MtC
<i>Festuca thracica</i> (Acht.) Markgr.-Dann. <sup>1</sup>	p	H	Bal	MtC
<i>Festuca valesiaca</i> Gaudin	p	H	Pont	NCC
<i>Glyceria arundinacea</i> Kunth	p	H	subBoreal	NCC
<i>Glyceria fluitans</i> (L.) R. Br.	p	H	Kos	SBC
<i>Glyceria maxima</i> (Hartm.) Holub	p	H	Boreal	SBC
<i>Glyceria plicata</i> (Fr.) Fr.	p	H	Kos	SCC
<i>Holcus lanatus</i> L.	p	H	Eur	SBC
<i>Hordeum bulbosum</i> L.	p	H	Eur-As	SCC
<i>Hordeum hystrix</i> Roth	a	Th	Eur-As	SCC
<i>Hordeum leporinum</i> Link	a	Th	Med-CAs	SCC
<i>Hordeum murinum</i> L.	a	Th	Boreal	SCC
<i>Hordeum secalinum</i> Schreb.	p	H	Boreal	NCC
<i>Koeleria macrantha</i> (Ledeb.) Schult.	p	H	Eur	NCC
<i>Koeleria nitidula</i> Velen. <sup>1</sup>	p	H	Pont	NCC
<i>Koeleria simonkai</i> Adamvić	p	H	Bal	NCC
<i>Leersia orysooides</i> (L.) Sw. <sup>2</sup>	p	H	subBoreal	NCC
<i>Lolium perenne</i> L.	p	H	Eur-As	SBC
<i>Lolium temulentum</i> L.	a	Th	Boreal	SCC
<i>Melica ciliata</i> L. <sup>1</sup>	p	H	Eur-subMed	NCC
<i>Melica picta</i> C. Koch	p	H	subMed	MtC
<i>Melica uniflora</i> Retz.	p	H	Eur	MtC
<i>Micropyrum tenellum</i> Link <sup>1</sup>	a	Th	subMed	SCC
<i>Millium vernale</i> M. Bieb. <sup>1</sup>	a	Th	subMed	SCC
<i>Phleum phleoides</i> (L.) H. Karst.	p	H	Eur-As	NCC
<i>Phleum pratense</i> L.	p	H	Eur-subMed	SBC
<i>Phleum subulatum</i> (Savi) Asch. & Graebn.	a	H	Eur-As	SBC
<i>Phragmites australis</i> (Cav.) Steud.	p	H	Kos	SCC
<i>Piptatherum holciforme</i> (M. Bieb.) Roem. & Schult.	p	H	subMed	SCC
<i>Piptatherum virescens</i> (Trin.) Boiss.	p	H	Med	MtC
<i>Poa angustifolia</i> L. <sup>1</sup>	p	H	Kos	
<i>Poa annua</i> L.	a	Th	Kos	MedC
<i>Poa bulbosa</i> L.	p	H	Eur-As	NCC
<i>Poa compressa</i> L.	p	H	Eur-subMed	NCC
<i>Poa nemoralis</i> L.	p	H	Boreal	SBC
<i>Poa pratensis</i> L.	p	H	Kos	SBC
<i>Poa sylvicola</i> Guss.	p	H	Eur-As	SBC
<i>Poa timoleontis</i> Boiss. <sup>1</sup>	p	H	CAs	SBC
<i>Poa trivialis</i> L.	p	H	Boreal	SBC
<i>Psilurus incurvus</i> (Gouan) Schinz & Thell.	a	Th	subMed	MedC
<i>Puccinellia limosa</i> (Schur) Holmb.	p	H	Pont-Pann	NCC

Table 1. Floristic list – continuation.

1	2	3	4	5
<i>Sclerochloa dura</i> (L.) P. Beauv.	a	Th	Eur-As	SCC
<i>Sesleria latifolia</i> (Adamović) Degen	p	H	Bal	MtC
<i>Setaria italica</i> (L.) P. Beauv.	a	Th	subSBoreal	SCC
<i>Setaria pumilla</i> (Poir.) Schult.	a	Th	Kos	SCC
<i>Setaria verticillata</i> (L.) P. Beauv.	a	Th	Kos	SCC
<i>Setaria viridis</i> (L.) P. Beauv.	a	Th	Boreal	SCC
<i>Sorghum halepense</i> (L.) Pers.	p	H	subMed-As	SBC
<i>Stipa capillata</i> L.	p	H	Pont-Med	NCC
<i>Stipa epilosa</i> Martinovsky <sup>1</sup>	p	H	subMed	NCC
<i>Taeniatherum caput-medusae</i> (L.) Nevski	a	Th	Eur-As	SCC
<i>Trachynia distachya</i> (L.) Link	a	Th	Med-As	SCC
<i>Tragus racemosus</i> (L.) All.	a	Th	subBoreal	SCC
<i>Ventenata dubia</i> (Leers) Coss.	a	Th	Pont-Med	SCC
<i>Vulpia ciliata</i> Dumort.	a	Th	Med-CAs	SCC
<i>Vulpia myurus</i> (L.) C.C. Gmel.	a	Th	subBoreal	SCC

**Not included in Table 1 species**

*Achillea millefolium*, *Actaea spicata*, *Asplenium viride*, *Blackstonia perfoliata*, *Cirsium candelabrum*, *Cotoneaster nebrodensis*, *Erigeron atticus*, *Gladiolus imbricatus*, *Lamium garganicum*, *Minuartia verna*, *Muscari tenuiflorum*, *Phyllitis scolopendrium*, *Rhinanthus angustifolius*, *Rhinanthus wagneri*, *Seseli annuum*, *Silaum silaus*, *Taraxacum erythrospermum*, *Taraxacum palustre*.

**Taxonomic analysis**

The analysis of data from literature and data collected in the field has allowed us to conclude that 1358 vascular plant species belonging to 516 genera and 103 families are distributed in the floristic region. A comparison between these data and the existing data for the Bulgarian flora (Petrova & al. 2005; Petrova & Vladimirov 2010) has shown that 33.7 % of all vascular plant species, 57.9 % of the genera and 70.1 % of the families are present in the floristic region. The proportions of orders *Equisetophyta*, *Polypodiophyta*, *Pinophyta*, and *Magnoliophyta* are presented in Table 2. The low participation of *Polypodiophyta* species is logical because of the low altitude of the area and the lack of appropriate environmental conditions. The order *Pinophyta* is represented by a single family, one genus and two species. *Pinus nigra* forests in the area are artificial plantations. Species from the order *Magnoliophyta* are the most numerous in the flora, while the ratio between the number of species belonging to *Magnoliopsida* (79.3 %) and *Liliopsida* (19.6 %) is very close to that for the country (81:19 %). In *Liliopsida*, the species from the *Poaceae* family claim the greatest participation (45.1 %). Generally, the representatives of *Liliopsida* are more numerous in the southern parts

Table 2. Taxonomic structure of the flora of the Valley of Mesta River (MV).

Taxa	Families				Genus				Species			
	Number of taxa in BG	Number of taxa in MV	% of the total number in BG	% of the total number in MV	Number of taxa in BG	Number of taxa in MV	% of the total number in BG	% of the total number in MV	Number of taxa in BG	Number of taxa in MV	% of the total number in BG	% of the total number in MV
<i>Equisetophyta</i>	1	1	100.00	0.97	1	1	100.00	0.19	8	4	0.50	0.29
<i>Polypodiophyta</i>	18	5	27.78	4.85	27	6	22.22	1.16	63	9	14.28	0.66
<i>Pinophyta</i>	4	1	25.00	0.97	6	1	16.67	0.19	17	2	11.76	0.15
<i>Magnoliophyta</i>	124	96	77.42	93.20	857	508	57.28	98.45	3942	1343	34.07	98.90
<i>Magnoliopsida</i>	107	86	69.36	83.49	665	407	45.90	78.88	3213	1077	27.32	79.31
<i>Liliopsida</i>	17	10	8.06	9.71	192	101	11.38	19.57	729	266	6.75	19.59

of the region, mainly species of *Poaceae* family, in accordance with prevalence of dry grasslands and rocky treeless terrains in these places. In the northern part of the floristic region, other *Liliopsida* families are better presented. Stanev (1976) had established a pattern for an increasing number of *Liliopsida*, at the expense of *Magnoliopsida*, from south to north and from east to west, under the increasing humidity of the Besaparski Hills. Such a pattern was moderately observed in the Valley of Mesta River, primarily in the east–west direction.

Families with the greatest participation of species and genera in the flora of the region are presented in Table 3. A comparison with data for the country (Petrova & al. 2005) has shown almost complete coincidence in ranking of the 10 richest families in descending order. The difference is in the place of the *Lamiaceae* and the *Rosaceae* family. The *Rosaceae* family is presented by a greater number of species in the mountainous areas because it is rich in alpine and boreal species, which fail to find appropriate conditions for development in the floristic region. The high participation of species of the *Lamiaceae* family is determined both by proximity of the Mediterranean region and the fact that representatives of *Lamiaceae* are mainly thermophilic and xerophilous, which helps them to find here favorable conditions for their development. The climatic conditions in the region and presence of dry, eroded areas and significant anthropogenic impact are some of the reasons for greater presence of the *Fabaceae* (principally annuals) and *Brassicaceae* families, whose species are mainly thermophilic, many of them synanthropic and successfully developing on dry, eroded and influenced by human activity areas. The richest in spe-

cies families are presented with the largest number of genera (Table 3). There were 73 genera considered rich (with five or more species) (14.2%), and *Trifolium* ranks first among them (30 species). Other diverse genera are also *Carex* (29 species), *Veronica* (23 species), *Ranunculus* (18 species), *Vicia* (17 species), *Silene* (16 species), *Centaurea* (15 species), *Bromus* and *Lathyrus* (14 species), *Chenopodium* (12 species), etc.

Table 3. Families with greatest participation of species and genera in the flora.

Families	Number of species	Number of genera
<i>Asteraceae</i>	153	58
<i>Poaceae</i>	120	58
<i>Fabaceae</i>	119	26
<i>Lamiaceae</i>	78	28
<i>Caryophyllaceae</i>	70	26
<i>Brassicaceae</i>	61	32
<i>Scrophulariaceae</i>	58	14
<i>Rosaceae</i>	49	17
<i>Apiaceae</i>	47	31
<i>Cyperaceae</i>	45	10

### Biological spectrum

The following life forms were established in the flora of the study area: phanerophytes – 7.3%, geophytes – 6.3%, chamaephytes – 3.5%, hemicryptophytes – 46.5%, and therophytes – 36.3%.

The presence of a large number of therophytes is typical for areas with Mediterranean influence (Stojanoff 1941; Stojanov 1950). Furthermore, according to Stanev (1976), the eroded areas with shallow soils also create favorable conditions for the development of species with such life form. The high percentage of hemicryptophytes in the biological spectrum is determined by the considerably temperate-continental in-

fluence in the region. This proportion of life forms in accordance to climate and geomorphology of the area illustrates well the nature of the flora. According to Stojanov (1922, 1950; Stojanoff 1941), the flora of the Balkans is dominated by hemicryptophytes and should be regarded as Central European, whereas here in the Valley of Mesta River we should consider the stronger Mediterranean climatic influence and the flora of this region can be described as transitional Mediterranean.

Herbaceous species (91.6%) dominate in the vegetation cover and more than half of them (52.9%) are perennials. Families presented mainly by the perennials are: *Lamiaceae* (85.9%), *Cyperaceae* (77.8%), *Apiaceae* (51.1%), *Asteraceae* (51.0%), and *Poaceae* (50.0%). The group of annuals and annuals to biennials is also well represented in the flora (34.9%), and most of them belong to the following families: *Brassicaceae* (55.7%), *Fabaceae* (49.6%) and *Poaceae* (40.0%). Trees and shrubs are underrepresented in the flora (8.4%), with prevalence of shrubs and semi-shrubs. Forest vegetation in the area is largely destroyed and degraded and its place is occupied by scrublands. Remnants of deciduous forests of *Quercus pubescens*, *Q. virgiliana*, *Q. frainetto* and *Carpinus orientalis* are characteristic of the region, the composition of which includes a large number of Mediterranean herbaceous and shrubby species. As a result of the negative human impact in many parts of the area, *Q. pubescens* and *C. orientalis* are present in shrubby forms. *Juniperus deltoides* (the current name after Adams (2004) and Adams & al. (2005) of the species *J. oxycedrus*) and *Juniperus communis* are widely distributed in the scrublands; their communities are rich in Mediterranean xerophilous species and occupy considerable areas.

### Chorological spectrum

Species distributed in the floristic regions relate to 55 floristic elements (Table 4), the greatest proportion of which are Euro-Asiatic (15.4%), sub-Mediterranean (14.5%) and Euro-Mediterranean (12.9%). Two wide groups can be distinguished: species with Mediterranean component (23.1%) and species with European component (22.1%). These data confirm the statements of Stojanov (1924, 1941, 1950) about the transitional nature of the flora in the area – from Mid-European to Mediterranean flora, where the Mediterranean element plays an essential role in the vegetation (Velčev & Tonkov 1986). Despite the fact, that occurrence of a large number of Mediterranean ele-

ments is determined primarily by the climatic and soil conditions, diversity of such species must be also explained by the historical development of the area. Human activity as disturbing factor has influenced strongly the presence of Mediterranean species in the flora of the area. According to Stojanov (1922), the conditions in natural habitats in the area (mainly termophilous forests) in the past were not particularly favorable for Mediterranean species. After clearing much of these forests, they were replaced by open scrublands known as “shiblyak”, which in the southern parts of the country consist mainly of Mediterranean small trees and shrubs: *Quercus pubescens*, *Carpinus orientalis*, *Paliurus spina-christi*, *Colutea arborescens*, *Coronilla emerus*, *Juniperus deltoids*, etc. Open places between shrubs provide good conditions for the development of herbaceous species from the Mediterranean area.

According to the classification of phytogeographic elements in Bulgaria (Stefanov 1943), most taxa identified in the floristic region originate from the Southern Continental Centre of Origin and Distribution (31.9%) and the Mountain Centre (23.2%). The geographic position, orography and climatic conditions in the area determine the high percentage of southern species. Generally, species of the South Continental Centre together with those of the Mediterranean Centre exceed 40%. The adventive element in the flora is approximately 2%.

Table 4. Phytogeographical elements.

Chorological type	Number of taxa	% of the total number of taxa
1	2	3
Eur-As (Eurasian)	208	15.4
SubMed (Submediterranean)	196	14.5
Eur-Med (Euro-Mediterranean)	175	12.9
Med (Mediterranean)	93	6.9
Eur (European)	90	6.6
Eur-Sib (Euro-Siberian)	87	6.4
Boreal (Boreal)	76	5.6
Kos (Cosmopolitan)	72	5.3
SubBoreal (Sub Boreal)	58	4.3
Pont-Med (Pontic-Mediterranean)	52	3.8
Bal (Balkan)	44	3.2
Eur-subMed (Euro-Submediterranean)	25	1.8
Adv (Adventive)	23	1.7

**Table 4.** Phytogeographical elements – continuation.

1	2	3
Pont (Pontic)	14	1.0
Med-CAs (Mediterranean-Central Asiatic)	14	1.0
Bal-Dac (Balkan-Dacian)	11	0.8
Eur-OT (Euro-Oriental Turanian)	10	0.7
sPont (South Pontic)	9	0.7
Bal-Anat (Balkan-Anatolian)	9	0.7
SubMed-As (Submediterranean-Asiatic)	7	0.5
Pont-subMed (Pontic-Submediterranean)	7	0.5
Pont-CAs (Pontic-Central Asiatic)	6	0.4
Pannonian-Balkan (Pann-Bal)	6	0.4
Eur-CAs (Euro-Central Asiatic)	5	0.3
Med-As (Mediterranean-Asiatic)	5	0.3
Pont-Sib (Pontic-Siberian)	4	0.3
Med-OT (Mediterranean-Oriental Turanian)	4	0.3
Eur-Pont (Euro-Pontic)	4	0.3
Bul (Bulgarian)	4	0.3
SubMed-CAs (Submediterranean-Central Asiatic)	3	0.2
sSib (South Siberian)	3	0.2
Pont-Bal (Pontic-Balkan)	3	0.2
Eur-Med-CAs (Euro-Mediterranean-Central Asiatic)	3	0.2
Ap-Bal (Apenninian-Balkan)	3	0.2
Pont-OT (Pontic-Oriental Turanian)	2	0.1
Carp-Bal (Carpathian-Balkan)	2	0.1
Alp-Med (Alpo-Mediterranean)	2	0.1
SubMed-Sib (Submediterranean-Siberian)	1	0.1
SubMed-Anat (Submediterranean-Anatolian)	1	0.1
Pont-SAs (Pontic-South Asiatic)	1	0.1
Pont-Pann (Pontic-Pannonian)	1	0.1
Pont-Pan-Bal (Pontic-Pannonian-Balkan)	1	0.1
Pont-Eux (Pontic-Euxinian)	1	0.1
Pont-As (Pontic-Asiatic)	1	0.1
Pann-Pont (Pontic-Pannonian)	1	0.1
Med-SAs (Mediterranean-South Asiatic)	1	0.1
Med-subMed (Mediterranean-Submediterranean)	1	0.1
Med-Atl (Mediterranean-Atlantic)	1	0.1
EEur (East European)	1	0.1
Eur-WAs (European-West Asiatic)	1	0.1
Eur-NAm (European-Nord American)	1	0.1
CAs (Central Asiatic)	1	0.1
CSEur (Central South European)	1	0.1
As (Asiatic)	1	0.1
Alp-Carp (Alpo-Carpathian)	1	0.1

**Conservation value of the flora**

The floristic region contains 47 species of conservation concern (3.5%) (Table 5). Twenty-nine of them are covered by the Bulgarian Biological Diversity Act. Twenty-four of all found species were evaluated at national level according to IUCN categories and criteria. Seven were considered Endangered (EN) and 17 Vulnerable (VU). At international level, there were 32 species recognized with conservation status: five fall into the category Rare (R) in the *IUCN Red List of Threatened Plants* (Walter & Gillet 1998), two species are covered by the Bern Convention, three species by the Directive 92/43/EEC, and 24 species are listed in Appendix II of CITES. The following species with highest conservation value deserve to be highlighted: *Campanula lanata*, *Echium russicum*, *Galanthus elwesii*, *Himantoglossum caprinum*, *Linum elegans*, *Sedum kostovii*, *Trachelium rumelianum* and several species of *Orchidaceae* family – *Anacamptis pyramidalis*, *Dactylorhiza romana*, *Himantoglossum caprinum*, *Limodorum abortivum*, *Ophrys cornuta*, *Orchis ustulata*.

**Table 5.** Species of conservation concern

EN – Endangered; VU – Vulnerable; BC – Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention); Directive 92/43/EEC – Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna; CITES, II – Convention on International Trade in Endangered Species of Wild Fauna and Flora (Annex II).

Taxon	Biological Diversity Act	National IUCN category	International conventions
1	2	3	4
<i>Anacamptis pyramidalis</i>	Annex 3	VU	CITES II
<i>Anthemis ruthenica</i>		VU	
<i>Atropa bella-donna</i>		VU	
<i>Campanula lanata</i>	Annex 3	VU	IUCN (R), BC
<i>Castanea sativa</i>		EN	
<i>Cephalanthera damasonium</i>			CITES II
<i>Cephalanthera longifolia</i>			CITES II
<i>Cephalanthera rubra</i>			CITES II
<i>Crocus olivieri</i>	Annex 3		
<i>Cyclamen hederifolium</i>			CITES II
<i>Dactylorhiza romana</i>	Annex 4	VU	CITES II
<i>Dactylorhiza saccifera</i>	Annex 4		CITES II
<i>Dactylorhiza sambucina</i>	Annex 4		CITES II
<i>Delphinium balcanicum</i>		EN	
<i>Echium russicum</i>	Annex 2,3	VU	Directive 92/43/EEC
<i>Fritillaria pontica</i>	Annex 3		IUCN (R)

**Table 5. Species of conservation concern – continuation.**

1	2	3	4
<i>Galanthus elwesii</i>	Annex 3	EN	CITES II
<i>Galium mirum</i>		VU	
<i>Hesperis sylvestris</i>	Annex 3	VU	
<i>Himantoglossum caprinum</i>	Annex 2,3	VU	CITES II, BC, Directive 92/43/EEC
<i>Juncus ranarius</i>	Annex 2a,3		
<i>Limodorum abortivum</i>	Annex 3	VU	CITES II
<i>Linum elegans</i>	Annex 3	EN	IUCN (R)
<i>Listera ovata</i>			CITES II
<i>Medicago constricta</i>		EN	
<i>Neottia nidus-avis</i>			CITES II
<i>Ophrys cornuta</i>	Annex 3	VU	CITES II
<i>Orchis coriophora</i>	Annex 4		CITES II
<i>Orchis elegans</i>	Annex 4		CITES II
<i>Orchis morio</i>	Annex 4		CITES II
<i>Orchis ovalis</i>	Annex 4		CITES II
<i>Orchis purpurea</i>	Annex 4		CITES II
<i>Orchis simia</i>	Annex 4		CITES II
<i>Orchis tridentata</i>	Annex 4		CITES II
<i>Orchis ustulata</i>	Annex 4	VU	CITES II
<i>Platanthera bifolia</i>			CITES II
<i>Platanthera chlorantha</i>			CITES II
<i>Polygala carniolica</i>		EN	
<i>Polygala hospita</i>		VU	
<i>Quercus coccifera</i>	Annex 3	EN	
<i>Sedum kostovii</i>	Annex 3	VU	IUCN (R)
<i>Trachelium rumelianum</i>	Annex 3	VU	IUCN (R)
<i>Trinia glauca</i>	Annex 3		
<i>Tulipa australis</i>	Annex 3		
<i>Typha schutleworthii</i>	Annex 3		Directive 92/43/EEC
<i>Utricularia vulgaris</i>		VU	
<i>Verbascum rorripifolium</i>		VU	

Endemics are poorly represented in the studied flora: four Bulgarian and 32 Balkan endemics (Table 6). The small number of endemics and species of conservation value can be explained, on the one hand, by the relatively small territory of the region, and on the other, by the high anthropogenic impact leading to changes in natural habitats and destruction of some of the populations (Kozuharov 1977; Velčev & Tonkov 1986; Assenov 2006). There are no protected areas within the floristic region. Most of the endemics and species with conservation significance have very limited distribution, with single or small number of

occurrences in the region, which calls for a detailed study of their populations for better protection. Parts of the territory of the floristic region fall within the boundaries of the European Ecological Network Natura 2000 – the site Dolna Mesta (southern part of the region) and the site Reka Mesta, including the area around Momima Kula gorge.

**Table 6. List of endemics.**

Taxon	Bulgarian endemics	Balkan endemics
1	2	3
<i>Achillea ageratifolia</i>		+
<i>Achillea clypeolata</i>		+
<i>Achillea pseudopectinata</i>		+
<i>Alkanna primuliflora</i>		+
<i>Alyssum corymbosoides</i>		+
<i>Armeria rumelica</i>		+
<i>Asyneuma anthericoides</i>		+
<i>Campanula lanata</i>		+
<i>Campanula scutellata</i>		+
<i>Chamaecytisus absinthioides</i>		+
<i>Crucianella graeca</i>		+
<i>Delphinium balcanicum</i>		+
<i>Dianthus moesiacus</i>		+
<i>Digitalis viridiflora</i>		+
<i>Festuca achtarovii</i>	+	
<i>Festuca thracica</i>		+
<i>Galium mirum</i>		+
<i>Galium rigidifolium</i>		+
<i>Genista rumelica</i>		+
<i>Knautia ambigua</i>		+
<i>Koeleria simonkai</i>		+
<i>Linum elegans</i>		+
<i>Melampyrum scardicum</i>		+
<i>Micromeria dalmatica</i>		+
<i>Minuartia bosniaca</i>		+
<i>Onobrychis degenii</i>		+
<i>Polygala rhodopea</i>		+
<i>Scabiosa triniifolia</i>		+
<i>Sedum kostovii</i>	+	
<i>Sempervivum leucanthum</i>	+	
<i>Sesleria latifolia</i>		+
<i>Silene frivaldskyana</i>		+
<i>Trachelium rumelianum</i>		+
<i>Trifolium trichopterum</i>		+
<i>Verbascum rorripifolium</i>		+
<i>Veronica krumovii</i>	+	

## Conclusion

The Valley of Mesta River floristic region possesses a rich and diverse flora of the subMediterranean type, representing about 34% of the species of the Bulgarian flora. The flora is largely formed under the Mediterranean climate influence and it has transitional features, including elements of the European and Mediterranean floras. The influence of the Mediterranean flora is expressed in the high percentage of therophytes in the biological spectrum and dominance of the Mediterranean group of floristic elements and species from the Southern Centre of Origin and Distribution. The significant presence of hemicryptophytes, European floristic elements and species from the Mountain Centre of Origin and Distribution testifies to participation of the European flora. The poor presence of adventive elements in the flora prompts the consideration that it is natural to a great extent. Despite the fact that the local flora is largely negatively affected by human activities, its richness and diversity are important for the Bulgarian flora in general.

**Acknowledgments.** The authors are grateful to Dr. Ana Petrova for her help during the preparation of the manuscript and to Prof. Minčo Ančev and Assist. Prof. Stoyan Stoyanov for identification of some plants. Special thanks are extended to the anonymous reviewer for the critical notes.

## References

- Adams, R.P. 2004. *Juniperus deltooides*, a new species, and nomenclatural notes on *Juniperus polycarpos* and *J. turcomanica* (Cupressaceae). – *Phytologia*, **86**(2): 49-53.
- Adams, R.P., Morris, J.A., Pandey, R.N. & Schwarzbach, A.E. 2005. Cryptic speciation between *Juniperus deltooides* and *Juniperus oxycedrus* (Cupressaceae) in the Mediterranean. – *Biochem. Syst. Ecol.*, **33**: 771-787.
- Ančev, M. 2007. Catalogue of the family *Brassicaceae* (*Cruciferae*) in the flora of Bulgaria. – *Phytol. Balcan.*, **13**(2): 153-178.
- Ančev, M. & Krendl, F. 2011. *Galium* sect. *Leiogalium* (*Rubiaceae*) in the Bulgarian flora – *Phytol. Balcan.*, **17**(3): 291-314
- Apostolova-Stoyanova, N. & Stoyanov, S. 2009. Systematical and phytogeographical analysis of the flora on Mt Golo Bardo. – *Phytol. Balcan.*, **15**(3): 401-430.
- Assenov, A. 2006. Biogeography of Bulgaria. AN-DI Andrian Tassev Press, Sofia (in Bulgarian).
- Assyov, B. & Petrova, A. (eds). 2006. Conspectus of the Bulgarian vascular flora. Distribution maps and floristic elements. Third revised and enlarged edition. Bulgarian Biodiversity Foundation, Sofia.
- Bern Convention. 1979. Convention on the Conservation of European Wildlife and Natural Habitats. Appendix I. <http://conventions.coe.int/Treaty/FR/Treaties/Html/104-1.htm>
- Biological Diversity Act. 2002. Decree No 283 accepted by the 39th National Assembly on 02 August 2002. – SG, No 77/09.08.2002. Pp. 9-42 (in Bulgarian).
- Biological Diversity Act (Act on Amending and Supplementing). 2007. – SG, No 94/16.11.2007. Pp. 2-44 (in Bulgarian).
- Biological Diversity Act (Act on Amending and Supplementing). 2009. – SG, No 19/13.03.2009. Pp. 2-71 (in Bulgarian).
- Bonchev, E., Karagjuleva, Ju., Kozhuharov, D., Kostadinov, V. & Savov, S. 1982. Geological map of Bulgaria. – In: Galabov, Zh. (ed.) Geography of Bulgaria. Vol. 1. Physical Geography. Natural Conditions and Resources. Publ. House Bulg. Acad. Sci., Sofia (in Bulgarian).
- Bondev, I. 1961. Neue und seltene pflanzen für die flora der Westrhodopen und des Mestatales (Im gebiet von Goce Delčev). – *Izv. Bot. Inst. (Sofia)*, **3**: 225-230. (in Bulgarian).
- Bondev, I. 1963. Floristische materialien. – *Izv. Bot. Inst. (Sofia)*, **11**: 165-166. (in Bulgarian).
- CITES 2011. Convention on International Trade in Endangered Species of Wild Fauna and Flora <http://www.cites.org>. (22.12.2011).
- Delipavlov, D. & Cheshmedzhiev, I. (eds). 2003. Key to the Plants of Bulgaria. Acad. Press Agrarian Univ., Plovdiv (in Bulgarian).
- Dimitrov, D. (ed.). 2001. Conspectus of the Bulgarian Vascular Flora. Distribution Maps and Floristic Elements. Ed. 1. BSBCP, Sofia.
- Dimitrov, D. 2002. New data on the flora of the floristic regions of Mt Slavyanka, Pirin Mts, the valley of river Mesta and Western and Central Rhodopes. – *Phytol. Balcan.*, **8**(2): 181-184.
- Dimitrov, D. (ed.). 2002. Conspectus of the Bulgarian Vascular Flora. Distribution Maps and Floristic Elements. Ed. 2. BSBCP, Sofia.
- Directive 92/43/EEC. Council Directive 92/43/EEC of 21 May 1992 on the Conservation of Natural Habitats and of Wild Fauna and Flora. – OJ L 206, 22.07.1992. Pp. 7-50.
- Ganchev, I. 1953. New and rare plants from southern parts of the country. – *Izv. Bot. Inst. (Sofia)*, **3**: 241-243 (in Bulgarian).
- Goranova, V. 2007. Reports 45-50. – In: Vladimirov, V. & al. (comps), New floristic records in the Balkans: 6. – *Phytol. Balcan.*, **13**(3): 439.
- Goranova, V., Vassilev, K. & Pedashenko, H. 2009. Reports 34-41. – In: Vladimirov, V. & al. (comps), New floristic records in the Balkans: 11. – *Phytol. Balcan.*, **15**(2): 280-281.
- Goranova, V., Vassilev, K. & Pedashenko, H. 2010. Reports 35-43. – In: Vladimirov, V. & al. (comps), New floristic records in the Balkans: 13. – *Phytol. Balcan.*, **16**(1): 149-150.
- Goranova, V., Pedashenko, H. & Vassilev, K. 2011a. Reports 52-59. – In: Vladimirov, V. & al. (comps), New floristic records in the Balkans: 15. – *Phytol. Balcan.*, **17**(1): 138-139.



- Goranova, V., Vassilev, K. & Pedashenko, H.** 2011b. Reports 70-72 – In: **Vladimirov, V. & al.** (comps), New floristic records in the Balkans: 17. – Phytol. Balcan., 17(3): 371.
- Goranova, V., Vassilev, K. & Pedashenko, H.** 2012. Floristic region the Valley of River Mesta – floristic studies during 2007-2011. – In: **Petrova, A.** (ed.), Proc. VII Natl. Conf. Bot., 29-3-09.2011, Sofia, pp. 333-338. Bulg. Bot. Soc., Sofia (in Bulgarian).
- Grozeva, N.** 2009. Variation and evolutionary tendencies in the genus *Chenopodium* L. in Bulgaria. *PhD Thesis*. Inst. Bot., Bulg. Acad. Sci., Sofia (in Bulgarian, unpubl.).
- Gushev, C., Denchev, C., Pavlova, D., Dimitrov, D., Koeva, I. & Georgiev, B.** 1997. Floristic characteristics of Vitanovo Reserve. – In: Studies in Nature Park Strandzha. Book I: 1-49 (in Bulgarian).
- Jordanov, D.** (ed.). 1963–1979. Flora Reipublicae Popularis Bulgaricae. Vols 1-7. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).
- Jordanov, D.** (ed.). 1966. Flora Reipublicae Popularis Bulgaricae. Vol. 3. In Aedibus Acad. Sci. Bulgaricae, Serdicae (in Bulgarian).
- Kožuharov, S.** 1977. Centers of form-differentiation and endemism in the Bulgarian flora, conservation and enrichment of the genetic fund. – Problems of Biology, 10: 34-61 (in Bulgarian).
- Kožuharov, S.** (ed.) 1992. Field Guide to the Vascular Plants in Bulgaria. Nauka & Izkustvo, Sofia (in Bulgarian).
- Kožuharov, S.** (ed.). 1995. Flora Reipublicae Bulgaricae. Vol. 10. Editio Acad. “Prof. Marin Drinov”, Serdicae (in Bulgarian).
- Kuzmanov, B.** 2012. *Filago* L., *Laphangium* (Hilliard & B.L. Burtt) Tzvelev, *Matricaria* L. – In: **Kožuharov S. & Ančev, M.** (eds), Flora Reipublicae Popularis Bulgaricae. Vol. 11., pp. 210-227, 363-364. Editio Acad. “Prof. Marin Drinov”, Serdicae (in Bulgarian).
- Kuzmanov, B. & Ančev, M.** 2012. *Achillea* L., *Galatella* Cass. – In: **Kožuharov S. & Ančev, M.** (eds), Flora Reipublicae Popularis Bulgaricae. Vol. 11., pp. 329-360. Editio Acad. “Prof. Marin Drinov”, Serdicae (in Bulgarian).
- Kuzmanov, B. & Gushev, Ch.** 2012. *Anthemis* L., *Cota* J. Gay – In: **Kožuharov S. & Ančev, M.** (eds), Flora Reipublicae Popularis Bulgaricae. Vol. 11., pp. 293-323. Editio Acad. “Prof. Marin Drinov”, Serdicae (in Bulgarian).
- Meshinev, T. & Apostolova, I.** 1998. Distribution of higher plants biodiversity and the problem of habitat diversity in Bulgaria. – Phytol. Balcan., 4(1-2): 151-159.
- Ninov, N.** 2002. Soils. – In: **Koprarev, I.** (ed.), Geography of Bulgaria. Physical Geography. Socio-Economic Geography. Pp. 277-315. ForCom, Sofia (in Bulgarian).
- Pashaliev, I.** 1995. Contribution to the flora of Southwest Bulgaria. – Phytol. Balcan., 1(2): 103-104.
- Pedashenko, H., Vassilev, K. & Goranova, V.** 2009. Reports 46-50. – In: **Vladimirov, V. & al.** (comps), New floristic records in the Balkans: 10. – Phytol. Balcan., 15(1): 127-128.
- Petrova, A.** (ed.) 2006. Atlas of Bulgarian Endemic Plants. Gea-Libris Publ. House, Sofia.
- Petrova, A.** 2012. *Dipsacaceae* Juss. – In: **Kožuharov S. & Ančev, M.** (eds), Flora Reipublicae Popularis Bulgaricae. Vol. 11., pp. 27-80. Editio Acad. “Prof. Marin Drinov”, Serdicae (in Bulgarian).
- Petrova, A. & Vladimirov, V.** (eds). 2009. Red List of Bulgarian Vascular Plants. – Phytol. Balcan., 15(1): 63-94.
- Petrova, A. & Vladimirov, V.** 2010. Balkan endemics in the Bulgarian flora. – Phytol. Balcan., 16(2): 293-311.
- Petrova, A., Vladimirov, V., Dimitrova, D. & Ivanova, D.** 2005. Current state of the Bulgarian fern and seed plant biodiversity. – In: **Petrova, A.** (ed.) Current State of Bulgarian Biodiversity. Pp. 75-104. Bulgarian Bioplatfrom, Sofia (in Bulgarian).
- Raukiaer, C.** 1934. The Life Forms of Plants and Statistical Plant Geography. Oxford Univ. Press, Oxford.
- Raycheva, Ts.** 2009. Biosystematic study of subgenus *Rumex* (*Rumex* L., *Polygonaceae* Juss.) in Bulgaria. *PhD Thesis*. Agrarian Univ. Plovdiv (in Bulgarian, unpubl.).
- Stanev, S.** 1976. Analysis of the flora of the Besaparski Ridove. – Bull. Mus. South Bulgaria, 11: 21-64 (in Bulgarian).
- Stefanov, B.** 1943. Phytogeographische Elemente in Bulgarien. – Sborn. Bulg. Akad. Nauk., 39: 1-509 (in Bulgarian).
- Stefanov, P.** 2002. Relief. Morphographic characteristic. – In: **Koprarev, I.** (ed.), Geography of Bulgaria. Physical Geography. Socio-Economic Geography. Pp. 29-42. ForCom, Sofia (in Bulgarian).
- Stojanoff, N.** 1941. Attempt at characterization of the main phytocoenoses in Bulgaria. – God. Sofiisk. Univ., Fiz.-Mat. Fak., 37(2): 93-194 (in Bulgarian).
- Stojanov, N.** 1922. Der tabak und selne Beziehung zu der Verbreitung der Mitteleurvegetation in Südbulgarien. Pechatnitsa “Hudozhnik”, Sofia (in Bulgarian).
- Stojanov, N.** 1924. Floristische notizen aus dem Bulgarischen Nordosten Mazedoniens – God. Sofiisk. Univ., Agronom. Fac., 20(2): 109-144 (in Bulgarian).
- Stojanov, N.** 1950. Uchebnik po rastitelna geografija (Handbook in Plant Geography). Nauka i Izkustvo Publ., Sofia (in Bulgarian).
- Stoyanov, K.** 2009. Biosystematic study of *Orobanchaceae* Vent. in Bulgaria. *PhD Thesis*. Agrarian Univ. Plovdiv (in Bulgarian, unpubl.).
- Stoyanov, S.** 2005. The vascular flora of the catchment basin of the river Roussenski Lom (Bulgaria) in the beginning of the 21<sup>st</sup> century. – Fl. Medit., 15: 351-383.
- Tolmachev, A.** 1974. Introduction to Plant Geography. Leningrad Univ. Press, Leningrad (in Russian).
- Tutin, T.G., Burges, N.A., Chater, A.O., Edmondson, J.R., Heywood, V.H., Moore, D.M., Valentine, D.H., Walters, S.M. & Webb, D.A.** (eds). 1993. Flora Europaea. Ed. 2. Vol. 1. Cambridge Univ. Press, Cambridge.
- Tutin, T.G., Heywood, V.H., Burges, N.A., Moore, D.M., Valentine, D.H., Walters, S.M. & Webb, D.A.** (eds). 1968–1980. Flora Europaea. Vols 2-5. Cambridge Univ. Press, Cambridge.
- Vaptsarov, I., Daneva, M. & Dinev, A.** 1982. Network and terraced valleys spectra. – In: **Galabov, Zh.** (ed.) Geography of Bulgaria. Vol. 1. Physical Geography. Natural conditions and resources. Pp. 90-100. Publishing House of the BAS, Sofia (in Bulgarian).
- Vasilev, P. & Andreev, N.** 1992. Analysis of the flora of the Mt Golo Bardo. – Fitologiya, 42: 3-21 (in Bulgarian).
- Vassilev, K., Goranova, V. & Pedashenko, H.** 2009. Reports 73-82. – In: **Vladimirov, V. & al.** (comps), New floristic records in the Balkans: 12. – Phytol. Balcan., 15(3): 446-447.

- Vassilev, K., Pedashenko, H. & Goranova, V. 2008. Reports 83-108 – In: Vladimirov, V. & al. (comps), New floristic records in the Balkans: 9. – *Phytol. Balcan.*, **14**(3): 411-412.
- Velčev, V. (ed.). 1982, 1989. *Flora Reipublicae Popularis Bulgaricae*. Vols 8-9. In *Aedibus Acad. Sci. Bulgaricae, Serdicae* (in Bulgarian).
- Velčev, V. 2002. New to the science species of the genera *Vicia* L. and *Festuca* L. from Bulgaria. – *Phytol. Balcan.*, **8**(1): 3-14.
- Velchev, V. & Tonkov, S. 1986. Vegetation and flora of Southwest Bulgaria. – In: Botev, B. (ed.), *Fauna of the Southwest Bulgaria*. Vol. 1, pp. 20-43. Publ. House Bulg. Acad. Sci., Sofia.
- Velčev, V. & Vassilev, P. 2002a. New taxa, chorological and ecological data on the flora of vascular plants in Bulgaria. – *Phytol. Balcan.*, **8**(1): 15-24.
- Velčev, V. & Vassilev, P. 2002b. New species of genus *Festuca* L. from Bulgaria. – *Phytol. Balcan.*, **8**(2): 185-190.
- Velčev, V., Petrov, Sl. & Gančev, Sl. 1960. Neue materialien und notizen über die flora im flussbebiet der Mesta, kreis Goce Delčev. – *Izv. Bot. Inst.*, **7**: 293-303.
- Velev, S. 2002. Climatic regioning. – In: Koprlev, I. (ed.), *Geography of Bulgaria. Physical Geography. Socio-Economic Geography*. Pp. 155-156. ForCom, Sofia (in Bulgarian).
- Vladimirov, V. 2012a. Contribution to the study of the vascular flora of Mt Vrashka Chuka. – In: Petrova, A. (ed.), *Proc. VII Natl. Conf. Bot.*, 29-30.09.2011, Sofia, pp. 191-206. *Bulg. Bot. Soc.*, Sofia (in Bulgarian).
- Vladimirov, V. 2012b. *Bidens* L., *Senecio* L., *Jacobaea* Mill. – In: Kožuharov S. & Ančev, M. (eds), *Flora Reipublicae Popularis Bulgaricae*. Vol. 11., pp. 267-271, 433-464. Editio Acad. "Prof. Marin Drinov", Serdicae (in Bulgarian).
- Walter, K. S. & Gillet, H. J. 1998. *1997 IUCN Red List of Threatened Plants*. Compiled by the World Conservation Monitoring Centre. IUCN. – The World Conservation Union, Gland, Switzerland & Cambridge.
- Yordanova, M., Velev, S. & Drenowsky, I. 2002. Characteristics of physico-geographical areas. – In: Koprlev, I. (ed.), *Geography of Bulgaria. Physical Geography. Socio-Economic Geography*. Pp. 391-410. ForCom, Sofia (in Bulgarian).
-