

Original paper

## Vihodtsevski's collection of the flora of Mt. Vitosha Bulgaria in SOM Herbarium at the Bulgarian Academy of Sciences

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**Summary.** The Herbarium (SOM) of the Department of the Institute of Biodiversity and Ecosystem Research at the Bulgarian Academy of Sciences, is one of the largest Herbaria in the Balkans. Of particular interest are the specialized collections stored in the herbarium; including the thematic collection of researcher Nikolay Vihodtsevski, which represents the plant diversity of Mt. Vitosha, near Sofia, Bulgaria. Even today, this collection is of great importance for the study of plant diversity in Bulgaria.

**Keywords:** Bulgaria, Herbarium SOM, vascular plants, Vihodtsevski, Mt. Vitosha.

### INTRODUCTION

The Herbarium of the Department of Plant and Fungal Diversity and Resources, which is located at the Institute of Biodiversity and Ecosystem Research in the Bulgarian Academy of Sciences, is the largest and most representative source of specimen-based information about Bulgarian flora, as well as one of the most significant information sources concerning Balkan flora. It has been registered as an internationally recognized herbarium under the acronym SOM in the *Index Herbariorum*. At present the herbarium comprises some 177000 specimens from all higher taxonomic groups of embryophytes – bryophytes, lycopodiophytes, equisetophytes, polypodiophytes, gymnosperms and angiosperms.

Of particular interest are the specialized collections stored in the herbarium. One such the-

matic collection was prepared by the researcher Nikolay Vihodtsevski, representing the plant diversity of Mt. Vitosha, near Sofia, Bulgaria.

The purpose of present study is to inform the botanical community of the existence of specialized collections which are stored in the Herbarium SOM, and to make their use more accessible.

### MATERIALS AND METHODS

The entire available collection has been reviewed, consisting of 22 carton boxes stored in SOM Herbarium. All samples have been digitized and deposited in the SOM database. The names of taxa have been aligned with current taxonomic schemes for respective families, following *Flora Reipublicae Popularis Bulgaricae* (Jordanov 1963, 1964, 1966, 1970, 1973, 1976, 1979; Velchev 1982, 1989), *Flora Reipublicae Bulgaricae* (Kožuharov 1995; Anchev and Kožuharov 2012) and the electronic data base "The Plant

List”, Version 1.1. (2013). Abbreviations of author names follow Brummitt and Powell (1992). Horological elements and abbreviations are as defined by Assyov et al. (2012). Threatened taxa have been identified in accordance with the Bulgarian Biodiversity Law (2002, 2017).

## RESULTS AND DISCUSSION

Nikolay Vihodtsevski was born on March 14, 1912 in St. Petersburg, Russia, in the family of a royal officer. After the October Revolution in 1917, his family emigrated from Russia and settled in Sofia, Bulgaria, where Nikolay would spend the rest of his life. He graduated from natural history at Sofia University in 1937 (Tchoumatchenco et al. 2012). Vihodtsevski has had diverse interests in the field of natural sciences - he was an excellent connoisseur of vascular flora and made numerous contributions to the butterfly and fish fauna of Bulgaria. From 1947 to 1952, he was Head of the Department of Natural History at “Uchtehprom” Factory, which produced preparations, models and collections of plants, insects, and skeletons of vertebrates, minerals and rocks. Later, in the period 1952-1966 he was recruited as a technical assistant at the newly established Institute Botany of the Bulgarian Academy of Sciences (BAS). It was then that Vihodtsevski was engaged in the creation of the Mountain Natural Station of BAS at Mt. Vitosha, where he created a rock garden with many endemic and rare plants from Bulgaria (Stanev 2015). During this period, he focused on the study of the floristic diversity of Mt. Vitosha, and created a rich collection of herbarium specimens. Toward the end of his career (1966-1974), Vihodtsevski began to work at the Herbarium of the Sofia University, where he was appointed Curator.

Vihodtsevski left an impressive collection of herbarium materials from Bulgaria for the preparation and dissemination of Herbarium Centuria by the Institute of Botany. Personally, he entered more than 38000 exsiccates in SOM. Certainly, one of the best of Vihodtsevsky’s collections is devoted to the floristic diversity of the beautiful Mt. Vitosha, which today is kept in SOM.

Vitosha is the fourth highest mountain in Bulgaria. It is located in the immediate proximity of Sofia, between the Rila-Rhodope massif and the Balkan Mountains, surrounded by three large valleys (Sofia, Pernik and Samokov). Vitosha is the only dome-shaped mountain in the country. It has an almost circular shape, with a diameter of 20 to 25 km and an occupancy area of 278 km sq. The highest peak is Cherni Vrah, which rises to 2290 m. More than 50% of the mountain is occupied by forests, 25% are pastures and the rest are rocks. In Vitosha there are over 1500 species of vascular plants that represents nearly 40% of the plant species found in Bulgaria. Today, most of the territory of the mountain is covered by Nature Park Vitosha.

Vihodtsevski’s thematic plant collection, dedicated to the vascular flora of Vitosha Mt., kept in SOM, is stored in 22 boxes and consists of 421 herbarium specimens from 398 taxa, 198 genera and 47 families, including 1 equisetophyte, 12 polypodiophytes, 8 gymnosperms and 377 angiosperms (106 monocotyledons and 271 dicotyledons) (Table 1). The collection includes 33 taxa of conservation significance, which originate from other parts of the country and are grown in the alpine garden created by Vihodtsevski. All specimens are in excellent condition. The richest genera are the following families: Asteraceae (86), Poaceae (73), Scrophulariaceae (34), Boraginaceae (21), Lamiaceae (21), Cyperaceae (20), whereas the richest species are the following genera: *Carex* (13), *Centaurea* (13), *Campanula* (9), *Festuca* (9), *Veronica* (9), *Achillea* (7), *Galium* (7), *Verbascum* (7), etc. In terms of floristic elements, Boreal elements are dominant (48), followed by Eur-As (44), and SubMeds (44), etc. The collection includes some species of importance for conservation efforts: 5 species are Bulgarian endemics, 22 – Balkan endemics and 11 are included in the Bulgarian Biodiversity Law (2002, 2017).

In conclusion, the significance of Vihodtsevski’s collection continues to be of immense importance to this day, as reference exsiccates in studying the taxonomy of the collected plant groups (Asteraceae, Poaceae, Scrophulariaceae, etc.) and the plant diversity of Mt. Vitosha and Bulgaria. We believe that publishing the contents of Vihodtsevski’s collection of Mt. Vitosha will make their use more accessible in studying the floristic diversity of this area.

## ACKNOWLEDGEMENTS

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**Table 1.** List of the taxa of Vihodtsevski's collection stored in the Herbarium SOM.

Taxon name	Floristic elements and conservation status
<b>Adoxaceae</b>	
<b>Adoxa</b>	
<i>Adoxa moschatellina</i> L.	Boreal
<b>Apiaceae</b>	
<b>Angelica</b>	
<i>Angelica panicii</i> Vandas ex Velen.	*Bal
<b>Heracleum</b>	
<i>Heracleum sibiricum</i> ssp. <i>ternatum</i> (Velen.) Briq.	Eur-As
<b>Opopanax</b>	
<sup>1</sup> <i>Opopanax chironium</i> subsp. <i>bulgaricum</i> (Vel.) N. Andr.	MNS, *Bul
<b>Seseli</b>	
<sup>2</sup> <i>Seseli tortuosum</i> L.	MNS, subMed
<b>Aristolochiaceae</b>	
<b>Asarum</b>	
<i>Asarum europaeum</i> L.	Eur-Sib
<b>Aspleniaceae</b>	
<b>Asplenium</b>	
<i>Asplenium ruta-muraria</i> L.	Boreal
<i>A. septentrionale</i> (L.) Hoffm.	Boreal
<i>A. trichomanes</i> L.	Kos
<b>Asteraceae</b>	
<b>Achillea</b>	
<sup>3</sup> <i>Achillea chrysocoma</i> Friv.	MNS, *Bal
<i>A. crithmifolia</i> Waldst. & Kit.	Pann-Bal
<i>A. grandifolia</i> Friv.	Bal-Anat
<i>A. lingulata</i> Waldst. & Kit.	Carp-Bal
<i>A. millefolium</i> L.	Eur-Sib
<i>A. multifida</i> (DC.) Boiss.	Carp-Bal
<i>A. nobilis</i> L.	Eur-WAs
<b>Antennaria</b>	
<i>Antennaria dioica</i> var. <i>australis</i> Gris (sub <i>A. dioica</i> f. <i>australis</i> )	Arct-Alp
<b>Anthemis</b>	
<sup>4</sup> <i>Anthemis carpatica</i> Waldst. & Kit. ex Willd. (sub <i>A. montana</i> )	MNS, Carp-Bal
<i>A. cotula</i> L.	Eur-Sib
<i>A. ruthenica</i> M. Bieb.	subMed
<b>Arctium</b>	
<i>Arctium lappa</i> L.	Eur-Med
<i>A. minus</i> (Hill) Bernh.	Eur-As

Taxon name	Floristic elements and conservation status
<b>Artemisia</b>	
<sup>5</sup> <i>Artemisia pedemontana</i> Balbis (sub <i>A. caucasica</i> )	MNS, Pont-Med, *BDL
<i>A. vulgaris</i> L.	subBoreal
<b>Bidens</b>	
<i>Bidens tripartita</i> Bojer (sub <i>B. tripartita</i> var. <i>orientalis</i> (Velen.) Sherff)	Boreal
<b>Carduus</b>	
<i>Carduus acanthoides</i> L.	Eur
<i>C. kernerii</i> subsp. <i>scardicus</i> (Griseb.) Kazmi (sub <i>C. scardicus</i> (Griseb.) Wettst.)	*Bal; Eur
<b>Carlina</b>	
<i>Carlina vulgaris</i> L.	Eur-Med
<b>Carthamus</b>	
<i>Carthamus lanatus</i> L.	subMed
<b>Centaurea</b>	
<sup>6</sup> <i>Centaurea adscendens</i> (Bartl.) Prodan (= <i>C. triumfettii</i> subsp. <i>variegata</i> var. <i>adscendens</i> )	MNS, Eur-Med
<i>C. jacea</i> subsp. <i>angustifolia</i> (DC.) Gremler (sub <i>C. jacea</i> ssp. <i>angustifolia</i> var. <i>pannonica</i> Heuff.)	Illyric-Adriatic
<i>C. nervosa</i> Willd.	Alp-Carp-Bal
<sup>7</sup> <i>C. orientalis</i> L.	MNS, Pont-Med
<i>C. phrygia</i> L.	Eur
<i>C. phrygia</i> subsp. <i>degeniana</i> (J. Wagner) Stoj. & Acht.	*Bal
<i>C. phrygia</i> subsp. <i>moesiaca</i> (Urum. & J. Wagner) Hayek (sub <i>C. phrygia</i> ssp. <i>phrygia</i> var. <i>moesiaca</i> (Urum. & J. Wagner) Hayek)	*Bul
<i>C. phrygia</i> subsp. <i>phrygia</i> var. <i>phrygia</i> L.	Eur
<i>C. scabiosa</i> L.	Eur-Sib
<i>C. scabiosa</i> subsp. <i>fritschii</i> (Hayek) Hayek	Eur-Sib
<i>C. stenolepis</i> A. Kern. (sub <i>C. phrygia</i> ssp. <i>stenolepis</i> (A. Kern.) Gugler)	subMed
<i>C. stoebe</i> subsp. <i>australis</i> (A. Kern.) Greuter (sub <i>C. micranthos</i> (Griseb.) Hayek)	subMed
<sup>8</sup> <i>C. stoebe</i> subsp. <i>australis</i> (A. Kern.) Greuter (= <i>C. stoebe</i> subsp. <i>micranthos</i> var. <i>australis</i> f. <i>genuina</i> )	MNS, subMed
<b>Chrysanthemum</b>	
<i>Chrysanthemum corymbosum</i> L.	Eur-Med
<i>Ch. macrophyllum</i> Waldst. & Kit.	Eur
<b>Cicerbita</b>	
<i>Cicerbita alpina</i> (L.) Wallr. (sub <i>Mulgedium alpinum</i> Less.)	Eur-Med
<b>Cichorium</b>	
<i>Cichorium intybus</i> L.	Eur-Sib
<b>Cirsium</b>	
<i>Cirsium appendiculatum</i> Griseb.	*Bal
<i>C. arvense</i> (L.) Scop.	Eur-As
<i>C. candelabrum</i> Griseb.	Carp-Bal
<i>C. canum</i> (L.) All.	Eur-Med
<i>C. heterotrichum</i> Pančić	subBal
<i>C. vulgare</i> (Savi) Ten (sub <i>C. lanceolatum</i> (L.) Hill)	Eur-Med
<b>Cota</b>	
<i>Cota tinctoria</i> subsp. <i>gaudium-solis</i> (Velen.) Oberpr. & Greuter (sub <i>Anthemis tinctoria</i> var. <i>gaudium-solis</i> )	*Bul, BDL
<b>Crepis</b>	
<i>Crepis biennis</i> Lapeyr.	subMed
<i>C. setosa</i> Haller f.	Eur-Med

Taxon name	Floristic elements and conservation status
<b>Crupina</b>	
<i>Crupina vulgaris</i> Pers. ex Cass.	<i>subMed</i>
<b>Doronicum</b>	
<i>Doronicum austriacum</i> Jacq.	<i>Eur-Med</i>
<i>D. columnae</i> Ten.	<i>Pont-Med</i>
<i>D. orientale</i> Hoffm. (sub <i>D. columnae</i> var. <i>orientale</i> )	<i>Bal-Dac</i>
<b>Erigeron</b>	
<i>Erigeron acer</i> L.	<i>Boreal</i>
<i>E. canadensis</i> L.	<i>N. America (alien species)</i>
<b>Filago</b>	
<i>Filago arvensis</i> L.	<i>Eur-Med</i>
<b>Gnaphalium</b>	
<i>Gnaphalium sylvaticum</i> L.	<i>Eur-Sib</i>
<b>Hieracium</b>	
<i>Hieracium cymosum</i> L.	<i>Eur-Sib</i>
<i>H. hoppeanum</i> Wallr. ex Nyman	<i>Eur-Med</i>
<i>H. murorum</i> L.	<i>Eur</i>
<i>H. pannosum</i> Boiss.	<i>Bal-Anat</i>
<i>H. pilosella</i> L.	<i>Eur-Med</i>
<i>H. praecurrens</i> Vuk.	<i>Alp-Bal</i>
<i>H. sparsum</i> Friv.	<i>subMed</i>
<b>Hypochaeris</b>	
<i>Hypochaeris maculata</i> L.	<i>Eur-Sib</i>
<b>Inula</b>	
<i>Inula britannica</i> L.	<i>Eur-Med</i>
<i>I. ensifolia</i> L.	<i>Eur-Med</i>
<i>I. hirta</i> L.	<i>Eur-Sib</i>
<i>I. oculus-christi</i> L.	<i>Eur-Med</i>
<b>Jacobaea</b>	
<i>Jacobaea abrotanifolia</i> subsp. <i>carpathica</i> (Herbich) B.Nord. & Greuter	<i>Carp-Bal</i>
<i>J. pancicii</i> (Degen) Vladimirov & Raab-Straube (sub <i>Senecio pancicii</i> Degen)	<i>*Bal</i>
<b>Lapsana</b>	
<i>Lapsana communis</i> L. (sub <i>L. communis</i> var. <i>glandulosa</i> )	<i>Eur-Sib</i>
<b>Leontodon</b>	
<i>Leontodon asper</i> (Waldst. & Kit.) Poir.	<i>Eur-Med</i>
<i>L. autumnalis</i> L.	<i>Eur-Sib</i>
<b>Leucanthemum</b>	
<i>Leucanthemum vulgare</i> (Vail.) Lam.	<i>Eur-Sib</i>
<b>Matricaria</b>	
<i>Matricaria chamomilla</i> L.	<i>Eur-As</i>
<i>M. caucasica</i> (Willd.) Poir.	<i>Bal-Cauc</i>
<b>Mycelis</b>	
<i>Mycelis muralis</i> (L.) Dumort. (sub <i>Lactuca muralis</i> (L.) Fresen.)	<i>Med</i>
<b>Petasites</b>	
<i>Petasites albus</i> (L.) Gaertn.	<i>Eur-Pont</i>
<b>Prenanthes</b>	
<i>Prenanthes purpurea</i> L.	<i>Eur-Med</i>
<b>Senecio</b>	
<i>Senecio vulgaris</i> L.	<i>Eur-As</i>
<b>Serratula</b>	
<i>Serratula tinctoria</i> L.	<i>Eur-Sib</i>

Taxon name	Floristic elements and conservation status
<b>Solidago</b>	
<i>Solidago virga-aurea</i> L.	Boreal
<b>Tanacetum</b>	
<i>Tanacetum vulgare</i> L.	Eur-Sib
<b>Taraxacum</b>	
<i>Taraxacum officinale</i> (L.) Weber ex F.H.Wigg.	Eur-Med
<b>Tragopogon</b>	
<i>Tragopogon orientalis</i> L. (sub <i>T. pratensis</i> var. <i>orientalis</i> (L.) Čelak.)	Eur-Med
<b>Tripleurospermum</b>	
<i>Tripleurospermum inodorum</i> (L.) Sch.Bip. (sub <i>Matricaria inodora</i> L.)	Eur-As
<i>T. tenuifolium</i> (Kit.) Freyn ex Freyn (sub <i>M. tenuifolia</i> (Kit.) Simonk.)	Eur-As
<b>Tussilago</b>	
<i>Tussilago farfara</i> L.	Eur-As
<b>Boraginaceae</b>	
<b>Buglossoides</b>	
<i>Buglossoides arvensis</i> (L.) I. M. Johnst. (sub <i>Lithospermum arvense</i> L.)	Eur-As
<i>B. purpureocaerulea</i> (L.) I. M. Johnst. (sub <i>L. purpureocaeruleum</i> L.)	Eur-As
<b>Cerinth</b>	
<i>Cerinth minor</i> L.	Pont-Med
<b>Cynoglossum</b>	
<i>Cynoglossum montanum</i> L.	subMed
<i>C. officinale</i> L.	SPont
<b>Echium</b>	
<i>Echium vulgare</i> L.	Eur-As
<b>Heliotropium</b>	
<sup>9</sup> <i>Heliotropium suaveolens</i> M. Bieb.	MNS, subMed
<b>Lappula</b>	
<sup>10</sup> <i>Lappula barbata</i> M. Bieb. Gürke (sub <i>L. echinata</i> Gilib.)	MNS, Med-CAs
<b>Myosotis</b>	
<i>Myosotis alpestris</i> F.W.Schmidt	Eur-Med
<i>M. caespitosa</i> Schultz.	subBoreal
<i>M. incrassata</i> Guss. (sub <i>M. idaea</i> Boiss. et Heldr.)	subMed
<i>M. ramosissima</i> Rochel (sub <i>M. hispida</i> Schlecht.)	subMed
<i>M. scorpioides</i> L. (sub <i>M. palustris</i> v. <i>scabra</i> )	Eur-NAm
<i>M. sparsiflora</i> Mikan. ex Pohl	Eur-As
<i>M. stricta</i> Linl ex Roem. et Schultes	Eur-As
<i>M. sylvatica</i> Hoffm.	Eur-As
<b>Onosma</b>	
<sup>11</sup> <i>Onosma arenaria</i> Waldst. & Kit.	MNS, Eur
<b>Pulmonaria</b>	
<i>Pulmonaria officinalis</i> L.	Eur
<i>P. rubra</i> Schott	Carp-Bal
<i>P. rubra</i> Schott - albino plant (sub <i>Pulmonaria rubra</i> f. <i>alba</i> )	Carp-Bal
<b>Symphytum</b>	
<i>Symphytum tuberosum</i> L.	Eur-Med
<b>Brassicaceae</b>	
<b>Aurinia</b>	
<i>Aurinia saxatilis</i> (L.) Desv. (sub <i>Alyssum saxatile</i> L.)	Eur-Med
<b>Campanulaceae</b>	
<b>Campanula</b>	
<i>Campanula abietina</i> Griseb. (sub <i>C. expansa</i> var. <i>abietina</i> f. <i>stefanofii</i> )	Carp-Bal

Taxon name	Floristic elements and conservation status
<i>C. alpina</i> Jacq.	Alp-Carp
<i>C. frivaldskyi</i> Steudel	*Bal
<i>C. glomerata</i> L.	Eur-OT
<i>C. moesiaca</i> Velen.	Bal
<i>C. persicifolia</i> L.	Eur-Sib
<i>C. rapunculoides</i> L.	Eur
<i>C. sparsa</i> Friv.	Bal-Carp;
<i>C. trachelium</i> L.	Boreal
<b>Jasione</b>	
<i>Jasione bulgarica</i> Stoj. & Stef.	*Bul, BDL
<i>J. heldreichii</i> Boiss. & Orph.	Eur-Med
<b>Legousia</b>	
<i>Legousia speculum-veneris</i> (L.) Durande ex Vill. (sub <i>Specularia speculum</i> A.DC.)	Eur-Med
<b>Caprifoliaceae</b>	
<b>Lonicera</b>	
<i>Lonicera caerulea</i> L.	Alp-Med
<i>L. nigra</i> L.	Alp-Bal
<i>L. xylosteum</i> L.	Eur-Sib
<b>Sambucus</b>	
<sup>12</sup> <i>Sambucus deborensis</i> (Koš.) Koš. (sub <i>S. ebulus</i> var. <i>laciniata</i> )	MNS, *Bal
<i>S. nigra</i> L.	Eur-Med
<i>S. racemosa</i> L.	Boreal
<b>Viburnum</b>	
<i>Viburnum lantana</i> L.	Eur-Med
<i>V. opulus</i> L.	Eur-Sib
<b>Caryophyllaceae</b>	
<b>Saponaria</b>	
<sup>13</sup> <i>Saponaria stranjensis</i> Jordanov	MNS, *Bal, BDL
<b>Convallariaceae</b>	
<b>Polygonatum</b>	
<i>Polygonatum verticillatum</i> (L.) All.	Eur-As
<b>Convolvulaceae</b>	
<b>Convolvulus</b>	
<i>Convolvulus arvensis</i> L.	Kos
<b>Crassulaceae</b>	
<b>Sedum</b>	
<i>Sedum album</i> L.	subMed
<i>S. cepaea</i> L.	subMed
<b>Sempervivum</b>	
<sup>14</sup> <i>Sempervivum zeleborii</i> Schott (sub <i>S. ruthenicum</i> (Koch) Vel.)	MNS, subMed
<b>Cupressaceae</b>	
<b>Juniperus</b>	
<i>Juniperus communis</i> var. <i>saxatilis</i> Pall. (sub <i>J. nana</i> Willd.)	subBoreal
<i>J. sibirica</i> Burgsd.	Boreal
<b>Cuscutaceae</b>	
<b>Cuscuta</b>	
<i>Cuscuta epithimum</i> (L.) L.	Eur
<i>C. monogyna</i> Vahl.	Eur-As
<b>Cyperaceae</b>	
<b>Carex</b>	
<i>Carex atrata</i> L.	Eur

Taxon name	Floristic elements and conservation status
<i>C. bueckii</i> Wimm.	<i>Eur</i>
<i>C. caryophyllea</i> Latourr. (sub <i>C. verna</i> Lam.)	<i>Boreal</i>
<i>C. digitata</i> L.	<i>Eur-Sib</i>
<i>C. halleriana</i> Asso	<i>Eur-As</i>
<i>C. hirta</i> L.	<i>Boreal</i>
<i>C. montana</i> L.	<i>Eur-Sib</i>
<i>C. nigra</i> (L.) Reichard (sub <i>C. goodenowii</i> J.Gay)	<i>Alp-Carp</i>
<i>C. pallescens</i> L.	<i>Boreal</i>
<i>C. pilosa</i> Scop.	<i>Eur-As</i>
<i>C. sylvatica</i> Huds.	<i>subMed</i>
<i>C. tricolor</i> Velen.	<i>Bul</i>
<i>C. umbrosa</i> Host	<i>Eur</i>
<b>Eriophorum</b>	
<i>Eriophorum angustifolium</i> Honck. (sub <i>E. polystachyon</i> )	<i>Boreal</i>
<i>E. latifolium</i> Hoppe	<i>Boreal</i>
<i>E. vaginatum</i> L.	<i>Eur-As</i>
<b>Eleocharis</b>	
<i>Eleocharis palustris</i> (L.) Roem. & Schult.	<i>Kos</i>
<b>Isolepis</b>	
<i>Isolepis setacea</i> (L.) R. Br. (sub <i>Scirpus setaceus</i> L.)	<i>Kos</i>
<b>Scirpus</b>	
<i>Scirpus sylvaticus</i> L.	<i>subBoreal</i>
<b>Trichophorum</b>	
<i>Trichophorum cespitosum</i> (L.) Hartm. (sub <i>Scirpus cespitosus</i> L.)	<i>Boreal</i>
<b>Dipsacaceae</b>	
<b>Cephalaria</b>	
<i>Cephalaria uralensis</i> (Murray) Roem. & Schult.	<i>Pont-Med</i>
<b>Knautia</b>	
<i>Knautia arvensis</i> (L.) Coult.	<i>Eur-Sib</i>
<i>K. drymeia</i> Heuff.	<i>Alp-Capr-Bal</i>
<b>Scabiosa</b>	
<sup>15</sup> <i>Scabiosa argentea</i> L. (sub <i>S. ucrainica</i> v. <i>eburnea</i> )	<i>MNS, Bal-Anat</i>
<i>S. ochroleuca</i> L.	<i>Eur-Sib</i>
<i>S. triniifolia</i> Friv. (sub <i>S. silaifolia</i> Velen.)	<i>*Bal</i>
<b>Succisa</b>	
<i>Succisa pratensis</i> Moench	<i>Eur</i>
<b>Dryopteridaceae</b>	
<b>Dryopteris</b>	
<i>Dryopteris dilatata</i> (Hoffm.) A. Gray (sub <i>Nephrodium spinulosum</i> (Müll.) Strempel)	<i>Boreal</i>
<i>D. filix-mas</i> (L.) Schott.	<i>Boreal</i>
<b>Gymnocarpium</b>	
<i>Gymnocarpium dryopteris</i> (L.) Newman (sub <i>Nephrodium dryopteris</i> (L.) Michx.)	<i>Boreal</i>
<b>Polystichum</b>	
<i>Polystichum aculeatum</i> (L.) Roth. ex Mert.	<i>Boreal</i>
<b>Equisetaceae</b>	
<b>Equisetum</b>	
<i>Equisetum hyemale</i> L.	<i>Boreal</i>
<b>Ericaceae</b>	
<b>Arctostaphylos</b>	
<i>Arctostaphylos uva-ursi</i> (L.) Spreng.	<i>Boreal</i>



Taxon name	Floristic elements and conservation status
<b>Bruckenthalia</b>	
<i>Bruckenthalia spiculifolia</i> (Salisb.) Reincheb.	<i>subMed</i>
<b>Calluna</b>	
<sup>16</sup> <i>Calluna vulgaris</i> (L.) Hull	<i>MNS, subBoreal, *BDL</i>
<b>Vaccinium</b>	
<i>Vaccinium myrtillus</i> L.	<i>Boreal</i>
<i>V. uliginosum</i> L.	<i>Boreal</i>
<i>V. vitis-idaea</i> L.	<i>Boreal</i>
<b>Fabaceae</b>	
<b>Anthyllis</b>	
<sup>17</sup> <i>Anthyllis vulneraria</i> subsp. <i>polyphylla</i> (DC.) Nyman p.p.	<i>MNS, Eur-Med</i>
<b>Genista</b>	
<i>Genista depressa</i> M. Bieb.	<i>subMed</i>
<i>G. ovata</i> Waldst. et Kit.	<i>Eur</i>
<i>G. tinctoria</i> L.	<i>Eur-Sib</i>
<b>Trifolium</b>	
<sup>18</sup> <sup>7</sup> <i>Trifolium rubens</i> L.	<i>MNS, Pont-Med</i>
<b>Vicia</b>	
<sup>19</sup> <i>Vicia narbonensis</i> L.	<i>MNS, Eur-As</i>
<b>Fagaceae</b>	
<b>Fagus</b>	
<i>Fagus sylvatica</i> L.	<i>Eur</i>
<b>Quercus</b>	
<i>Quercus cerris</i> L.	<i>Eur-subMed</i>
<i>Q. petraea</i> (Matt.) Liebl. (sub <i>Q. sessiliflora</i> Salisb. and <i>Q. sessilis</i> Ehrh.)	<i>Eur</i>
<i>Q. pubescens</i> Willd.	<i>Eur-subMed</i>
<b>Gentianaceae</b>	
<b>Centaurium</b>	
<i>Centaurium erythraea</i> Raf. (sub <i>Erythraea centaurium</i> (L.) Pers.)	<i>subMed</i>
<i>C. erythraea</i> subsp. <i>rumelicum</i> (Velen.) Melderis (sub <i>Erythraea centaurium</i> ssp. <i>rumelica</i> )	<i>subMed</i>
<b>Gentiana</b>	
<i>Gentiana asclepiadea</i> L.	<i>Eur</i>
<i>G. bulgarica</i> (Velen.) Holub	<i>Pont</i>
<i>G. cruciata</i> L.	<i>Eur-Sib</i>
<i>G. punctata</i> L.	<i>Alp-Carp, *BDL</i>
<i>G. verna</i> L.	<i>Eur-As</i>
<b>Gesneriaceae</b>	
<b>Haberlea</b>	
<sup>20</sup> <i>Haberlea rhodopensis</i> Friv.	<i>MNS, *Bal, BDL</i>
<b>Hyacinthaceae</b>	
<b>Muscari</b>	
<i>Muscari botryoides</i> (L.) Mill.	<i>Med</i>
<b>Ornithogalum</b>	
<i>Ornithogalum montanum</i> Ten.	<i>Alp-Bal</i>
<i>O. orthophyllum</i> subsp. <i>orbelicum</i> (Velen.) Zahar. (sub <i>O. tenuifolium</i> ssp. <i>orbelicum</i> Velen.)	<i>*Bul</i>
<b>Scilla</b>	
<i>Scilla bifolia</i> L.	<i>Pont-subMed</i>

Taxon name	Floristic elements and conservation status
<b>Iridaceae</b>	
<b>Crocus</b>	
<i>Crocus veluchensis</i> Herb.	*Bal
<b>Gladiolus</b>	
<i>Gladiolus imbricatus</i> L.	Eur-sMed
<b>Iris</b>	
<i>Iris variegata</i> L.	subMed
<b>Lamiaceae</b>	
<b>Acinos</b>	
<i>Acinos arvensis</i> (Schur) Dandy ( <i>Satureja acinos</i> (L.) Scheele)	Eur-Med
<b>Betonica</b>	
<sup>21</sup> <i>Betonica haussknechtii</i> (Nyman) Hausskn. (sub <i>Stachys balcanica</i> P.W. Ball.)	MNS, Bal*BDL
<i>B. officinalis</i> L.	subMed
<b>Hyssopus</b>	
<sup>22</sup> <i>Hyssopus officinalis</i> L.	MNS, Eur-As
<b>Salvia</b>	
<sup>23</sup> <i>Salvia forskaohlei</i> L.	MNS, SEux, *BDL
<i>S. glutinosa</i> L.	Eur-As
<i>S. nemorosa</i> L.	Eur-OT
<i>S. verticillata</i> L.	subMed
<b>Satureja</b>	
<i>Satureja montana</i> L. (sub <i>S. montana</i> v. <i>genuina</i> )	Pont-Med
<b>Scutellaria</b>	
<i>Scutellaria altissima</i> L.	Eur
<i>S. columnae</i> All.	subMed
<b>Stachys</b>	
<i>Stachys alpina</i> L.	Alp-Carp
<i>S. germanica</i> L.	Eur-subMed
<i>S. sylvatica</i> L.	Eur-As
<b>Teucrium</b>	
<i>Teucrium chamaedrys</i> L.	subMed
<i>T. polium</i> L.	Pont-Med
<b>Thymus</b>	
<sup>24</sup> <i>T. comptus</i> Friv. (sub <i>T. glaucus</i> nom. Illegit.)	MNS, *Bal
<i>T. pannonicus</i> All. (sub <i>T. marschallianus</i> Bees.)	Eur
<i>T. pulegioides</i> L.	Eur
<i>T. pulegioides</i> subsp. <i>montanus</i> (Benth.) Ronniger (sub <i>T. pulegioides</i> var. <i>montanus</i> )	Eur
<i>T. vandasii</i> Velen. (sub <i>T. balcanus</i> Borbás.)	Eur-Med
<b>Lentibulariaceae</b>	
<b>Pinguicula</b>	
<i>Pinguicula balcanica</i> Casper (sub <i>P. vulgaris</i> L.)	*Bal
<b>Liliaceae</b>	
<b>Erythronium</b>	
<i>Erythronium dens-canis</i> L.	Med
<b>Gagea</b>	
<i>Gagea pratensis</i> (Pers.) Dumort.	Eur
<b>Paris</b>	
<i>Paris quadrifolia</i> L.	Eur-Sib

Taxon name	Floristic elements and conservation status
<b>Melanthiaceae</b>	
<b>Veratrum</b>	
<i>Veratrum lobelianum</i> Bernh.	<i>Eur-As</i>
<i>V. nigrum</i> L.	<i>Eur-As</i>
<b>Molluginaceae</b>	
<b>Mollugo</b>	
<sup>25</sup> <i>Mollugo cerviana</i> (L.) Ser.	<i>MNS, Pont-Med</i>
<b>Oleaceae</b>	
<b>Fraxinus</b>	
<i>Fraxinus excelsior</i> L.	<i>Eur-Med</i>
<i>F. ornus</i> L.	<i>subMed</i>
<b>Ligustrum</b>	
<i>Ligustrum vulgare</i> L.	<i>subMed</i>
<b>Ophioglossaceae</b>	
<b>Botrychium</b>	
<i>Botrychium lunaria</i> (L.) Sw	<i>Boreal</i>
<b>Pinaceae</b>	
<b>Abies</b>	
<i>Abies alba</i> Mill.	<i>Boreal</i>
<b>Picea</b>	
<i>Picea abies</i> (L.) H. Karst. (sub <i>P. excelsa</i> Link)	<i>Boreal</i>
<b>Pinus</b>	
<i>Pinus mugo</i> Turra (sub <i>P. montana</i> Mill.)	<i>Alp-Carp-Bal</i>
<i>P. peuce</i> Griseb.	<i>*Bal</i>
<i>P. sylvestris</i> L.	<i>subBoreal</i>
<b>Plantaginaceae</b>	
<b>Kickxia</b>	
<sup>26</sup> <i>Kickxia spuria</i> (L.) Dumort. (sub. <i>Elatinoides spuria</i> )	<i>MNS, subMed</i>
<b>Plantago</b>	
<i>Plantago atrata</i> Hoppe (sub <i>P. montana</i> Griseb.)	<i>subMed</i>
<sup>27</sup> <i>P. coronopus</i> L.	<i>MNS, Eur-Med</i>
<i>P. lanceolata</i> L.	<i>Kos</i>
<i>P. major</i> L.	<i>Boreal</i>
<i>P. media</i> L.	<i>Boreal</i>
<sup>28</sup> <i>P. scabra</i> Moench (sub <i>P. arenaria</i> )	<i>MNS, Eur-Sib</i>
<i>P. subulata</i> L. (sub <i>P. carinata</i> Schrad. ex Mert. & W.D.J. Koch)	<i>Med</i>
<b>Plumbaginaceae</b>	
<b>Armeria</b>	
<i>Armeria rumelica</i> Boiss.	<i>*Bal</i>
<b>Poaceae</b>	
<b>Agrostis</b>	
<i>Agrostis capillaris</i> L.	<i>Boreal</i>
<i>A. rupestris</i> All.	<i>Alp-Carp-Bal</i>
<b>Alopecurus</b>	
<i>Alopecurus gerardii</i> Vill.	<i>Alp-Ap-Bal</i>
<i>A. pratensis</i> L.	<i>Eur-As</i>
<i>A. utriculatus</i> Sol.	<i>SubMed</i>
<b>Anthoxanthum</b>	
<i>Anthoxanthum odoratum</i> L.	<i>Eur-As</i>
<b>Apera</b>	
<i>Apera spica-venti</i> (L.) P. Beauv	<i>subBoreal</i>

Taxon name	Floristic elements and conservation status
<b>Arrhenatherum</b>	
<i>Arrhenatherum elatius</i> (L.) P. Beauv. ex J. Presl & C. Presl	Eur-As
<b>Avena</b>	
<i>Avena planiculmis</i> (Schrader) W. Sauer & Chmel. (sub <i>A. planiculmis</i> Schrader)	Bal-Anat
<i>A. pubescens</i> Huds.	SSib
<b>Bothriochloa</b>	
<i>Bothriochloa ischaemum</i> (L.) Keng (sub <i>Andropogon ischaemum</i> L.)	subMed-As
<b>Brachypodium</b>	
<i>Brachypodium pinnatum</i> (L.) P. Beauv.	SSib
<b>Briza</b>	
<i>Briza maxima</i> L. f. <i>maxima</i>	Med
<i>B. media</i> L.	Eur
<b>Bromus</b>	
<i>Bromus arvensis</i> L.	Eur-As
<i>B. inermis</i> Leyss. (sub <i>F. poiformis</i> Pers.)	Eur-As
<i>B. mollis</i> L.	Boreal
<i>B. ramosus</i> Huds. (sub <i>B. asper</i> Murray)	subMed-As
<i>B. squarrosus</i> L.	subMed
<i>B. tectorum</i> L.	Boreal
<b>Calamagrostis</b>	
<i>Calamagrostis arundinacea</i> (L.) Roth.	subBoreal
<i>C. epigeios</i> (L.) Roth.	Eur-As
<b>Cynosurus</b>	
<i>Cynosurus cristatus</i> L.	Eur
<i>C. echinatus</i> L.	subMed
<b>Dactylis</b>	
<i>Dactylis glomerata</i> L.	Eur-As
<b>Dasyphyrum</b>	
<i>Dasyphyrum villosum</i> (L.) Borbás (sub <i>Haynaldia villosa</i> (L.) Schur.)	subMed
<b>Deschampsia</b>	
<i>Deschampsia caespitosa</i> (L.) P. Beauv.	Boreal
<b>Digitaria</b>	
<i>Digitaria sanguinalis</i> (L.) Scop. (sub <i>Panicum sanguinale</i> L.)	Cos
<b>Elymus</b>	
<i>Elymus caninus</i> (L.) L. (sub <i>Agropyron caninum</i> (L.) P. Beauv)	Boreal
<b>Eragrostis</b>	
<i>Eragrostis pilosa</i> (L.) P. Beauv.	Cos
<b>Festuca</b>	
<i>Festuca airoides</i> Lam. (sub <i>F. ovina</i> var. <i>supina</i> Hack.)	Boreal
<i>F. arundinacea</i> Schreb. (sub <i>F. elatior</i> L.)	Pont-SAs
<i>F. dalmatica</i> (Hack.) K.Richt.	subMed
<i>F. gigantea</i> (L.) Vill.	Boreal
<i>F. heterophylla</i> Lam. (sub <i>F. heterophylla</i> f. <i>leiophylla</i> (Hack) Richt.)	Boreal
<i>F. paniculata</i> (L.) Schinz & Thell. (sub <i>F. spadicea</i> L.)	Alp-Carp-Bal
<i>F. pseudovina</i> Hack. ex Wiesb. var. <i>tenuis</i> (Hack.) Acht.	subMed
<i>F. rubra</i> L. (sub <i>F. fallax</i> Thuill.)	Boreal
<i>F. valida</i> (R.Uechtr.) Péntzes (sub <i>Festuca varia</i> ssp. <i>varia</i> var. <i>valida</i> )	*Bal

Taxon name	Floristic elements and conservation status
<b>Glyceria</b>	
<i>Glyceria fluitans</i> (L.) R. Br.	Kos
<i>G. plicata</i> Fr. var. <i>plicata</i>	Kos
<b>Holcus</b>	
<i>Holcus lanatus</i> L.	Eur
<b>Hordeum</b>	
<i>Hordeum murinum</i> L.	Boreal
<i>H. secalinum</i> Schreb.	Boreal
<b>Hordelymus</b>	
<i>Hordelymus europaeus</i> (L.) Jess. ex Harz (sub <i>H. silvaticum</i> Huds.)	Eur-sMed
<b>Koeleria</b>	
<i>Koeleria macrantha</i> (Ledeb.) Schult. (sub <i>K. gracilis</i> Pers.)	Eur
<b>Lerchenfeldia</b>	
<i>Lerchenfeldia flexuosa</i> (L.) Schur (sub <i>D. flexuosa</i> (L.) Trin.)	Boreal
<b>Lolium</b>	
<i>Lolium perenne</i> L.	Eur-As
<b>Melica</b>	
<i>Melica uniflora</i> Retz.	Eur
<b>Milium</b>	
<i>Milium effusum</i> L.	subBoreal
<b>Nardus</b>	
<i>Nardus stricta</i> L.	Arct-Alp
<b>Pennisetum</b>	
<i>Pennisetum glaucum</i> (L.) R.Br. (sub <i>Setaria glauca</i> (L.) P. Beauv.)	Adv.
<b>Phalaris</b>	
<i>Phalaris canariensis</i> L.	Med
<b>Phleum</b>	
<i>Phleum alpinum</i> L.	Arct-Alp
<i>P. montanum</i> K. Koch (sub <i>P. serrulatum</i> Boiss)	Med
<i>P. phleoides</i> (L.) H. Karst. (sub <i>P. boehmeri</i> Wibel)	Eur-As
<i>P. pratense</i> L.	Eur-subMed
<i>P. pratense</i> var. <i>nodosum</i> (L.) Schrad.	Eur-subMed
<b>Poa</b>	
<i>Poa alpina</i> L.	Boreal
<i>P. annua</i> L.	Kos
<i>P. bulbosa</i> L.	Eur-As
<i>P. compressa</i> L.	Eur-subMed
<i>P. nemoralis</i> L.	Boreal
<i>P. trivialis</i> L. (sub <i>P. silvicola</i> Guss.)	Boreal
<i>P. ursina</i> Velen.	*Bal
<b>Polypogon</b>	
<sup>29</sup> <i>Polypogon monspeliensis</i> (L.) Desf.	MNS, Kos
<b>Sclerochloa</b>	
<i>Sclerochloa dura</i> (L.) P. Beauv.	Eur-As
<b>Sesleria</b>	
<i>Sesleria comosa</i> Velen.	*Bal
<b>Setaria</b>	
<i>Setaria viridis</i> (L.) P. Beauv.	Boreal
<b>Stipa</b>	
<i>Stipa capillata</i> L.	Pont-Med

Taxon name	Floristic elements and conservation status
<b>Tragus</b>	
<sup>30</sup> <i>Tragus racemosus</i> (L.) All.	MNS, subBoreal
<b>Vulpia</b>	
<i>Vulpia myurus</i> (L.) C.C. Gmel.	subBoreal
<i>V. unilateralis</i> (L.) Stace ( <i>V. montana</i> M. Bieb.)	Med-Ch
<b>Polypodiaceae</b>	
<b>Polypodium</b>	
<i>Polypodium vulgare</i> L.	Boreal
<b>Primulaceae</b>	
<b>Anagallis</b>	
<i>Anagallis arvensis</i> ssp. <i>coerulea</i> (L.) Gouan	Kos
<b>Lysimachia</b>	
<i>Lysimachia nummularia</i> L.	Eur
<i>L. punctata</i> L.	Pont-Med
<i>L. vulgaris</i> L.	Eur-As
<b>Primula</b>	
<i>Primula farinosa</i> L.	Eur
<i>P. veris</i> L. (sub <i>P. officinalis</i> (L.) Hill)	Eur-Med
<i>P. veris</i> subsp. <i>suaveolens</i> (Bertol.) Gutermann & Ehrend. (sub <i>P. officinalis</i> var. <i>columnae</i> (Ten.) Maire & Petitm.)	Eur-Med
<b>Soldanella</b>	
<i>Soldanella hungarica</i> Simonk. (sub <i>S. montana</i> Willd.)	Eur
<b>Pteridiaceae</b>	
<b>Pteridium</b>	
<i>Pteridium aquilinum</i> (L.) Kuhn	Kos
<b>Ranunculaceae</b>	
<b>Aconitum</b>	
<sup>31</sup> <i>Aconitum lamarrckii</i> Rchb. (sub <i>A. lycoctonum</i> L.)	MNS, subMed
<b>Clematis</b>	
<i>Clematis viticella</i> L.	Pont-Med
<b>Thalictrum</b>	
<sup>32</sup> <i>Thalictrum minus</i> var. <i>olympicum</i> (Boiss. & Heldr.) Strid	MNS, Eur-Sib
<b>Rubiaceae</b>	
<b>Asperula</b>	
<i>Asperula aristata</i> L.f. (sub <i>A. longiflora</i> Waldst. et Kit.)	subMed
<i>A. cynanchica</i> L.	Eur-Med
<i>A. purpurea</i> (L.) Ehrend. (sub <i>G. purpureum</i> L.)	subMed
<i>A. rumelica</i> Boiss. (sub <i>A. cynanchica</i> ssp. <i>montana</i> Waldst. et Kit. ex Willd.)	subMed
<b>Cruciata</b>	
<i>Cruciata laevipes</i> Opiz (sub <i>G. cruciata</i> (L.) Scop.)	subMed-CAs
<i>C. pedemontana</i> (Bellardi) Ehrend. (sub <i>Galium pedemontanum</i> (Bellardi) All.)	Med-CAs
<b>Galium</b>	
<i>Galium aparine</i> L.	Eur-As
<i>G. intermedium</i> Schult. (sub <i>Galium sylvaticum</i> ssp. <i>schultesii</i> Vest.)	subMed
<i>G. odoratum</i> L. Scop. (sub <i>Asperula odorata</i> L.)	Eur-As
<i>G. palustre</i> L.	Boreal
<i>G. rivale</i> (Sibth. & Sm.) Griseb. (sub <i>Asperula rivalis</i> Sibth. et Sm.)	Pont-Sib
<i>G. verum</i> L.	Eur-As
<i>G. verum</i> var. <i>alpinum</i> Krilov ex Serg.	Eur-As
<b>Sherardia</b>	
<i>Sherardia arvensis</i> L.	Med

Taxon name	Floristic elements and conservation status
<b>Scrophulariaceae</b>	
<b>Digitalis</b>	
<i>Digitalis grandiflora</i> Mill. (sub <i>D. ambigua</i> Murray)	<i>Eur-Sib</i>
<i>D. lanata</i> Enrh.	<i>subMed</i>
<sup>33</sup> <i>D. purpurea</i> L.	<i>MNS, westEur</i>
<sup>34</sup> <i>D. viridiflora</i> Lindl.	<i>MNS, *Bal</i>
<b>Euphrasia</b>	
<i>Euphrasia liburnica</i> Wettst.	<i>Carp-Bal</i>
<i>E. pectinata</i> Ten. (sub <i>E. tatarica</i> Fisch. ex Spreng.)	<i>subMed</i>
<i>E. stricta</i> D. Wolff ex. Lehm.	<i>Eur-Med</i>
<b>Linaria</b>	
<i>Linaria dalmatica</i> (L.) Mill.	<i>Med</i>
<b>Melampyrum</b>	
<i>Melampyrum cristatum</i> L.	<i>Eur-Sib</i>
<i>M. pratense</i> L.	<i>Eur-Sib</i>
<i>M. sylvaticum</i> L.	<i>Eur</i>
<b>Misopates</b>	
<i>Misopates orontium</i> (L.) Raf. (sub <i>Antirrhinum orontium</i> L.)	<i>Eur-Med</i>
<b>Pedicularis</b>	
<i>Pedicularis occulta</i> Janka	<i>Bul</i>
<i>P. orthantha</i> Griseb.	<i>*Bal</i>
<b>Pseudolysimachion</b>	
<sup>35</sup> <i>Pseudolysimachion longifolium</i> (L.) Opiz (sub <i>Veronica spicata</i> )	<i>MNS, Eur-CAs</i>
<b>Rhinanthus</b>	
<i>Rhinanthus minor</i> L.	<i>Eur-Sib</i>
<i>R. wagneri</i> Degen	<i>subMed</i>
<b>Scrophularia</b>	
<i>Scrophularia scopolii</i> Hoppe ex Pers.	<i>Eur-Med</i>
<b>Verbascum</b>	
<i>Verbascum abietinum</i> Borbás	<i>Bul-Dac</i>
<sup>36</sup> <i>V. adrianopolitanum</i> Podp.	<i>MNS, *Bal, BDL</i>
<i>V. formanekii</i> Borbás ex Formanek	<i>Bul</i>
<i>V. longifolium</i> Ten. subsp. <i>pannosum</i> (Vis.) Murb. (sub <i>V. pannosum</i> Vis. & Pančić)	<i>Eur-Med</i>
<i>V. phoeniceum</i> L.	<i>Eur-Sib</i>
<i>V. phoeniceum</i> subsp. <i>flavidum</i> (Boiss.) Bornm.	<i>Eur-Sib</i>
<i>V. speciosum</i> Schrad.	<i>Eur-Med</i>
<b>Veronica</b>	
<i>Veronica austriaca</i> L. (sub <i>V. jacquinii</i> Baumg.)	<i>Eur-Med</i>
<i>V. beccabunga</i> L.	<i>Eur-As</i>
<i>V. chamaedrys</i> L.	<i>Eur-As</i>
<i>V. hederifolia</i> L. var. <i>hederifolia</i>	<i>Eur-Med</i>
<i>V. officinalis</i> L.	<i>Eur-Sib</i>
<i>V. scutellata</i> L.	<i>Eur</i>
<i>V. serpyllifolia</i> L.	<i>Boreal</i>
<i>V. teucrium</i> L.	<i>Eur-Sib</i>
<i>V. verna</i> L.	<i>Eur-Sib</i>
<b>Solanaceae</b>	
<b>Atropa</b>	
<i>Atropa bella-donna</i> L.	<i>Eur</i>
<b>Solanum</b>	
<i>Solanum dulcamara</i> L.	<i>Eur-As</i>

Taxon name	Floristic elements and conservation status
<b>Taxaceae</b>	
<b>Taxus</b>	
<i>Taxus baccata</i> L.	<i>Eur-NAm, *BDL</i>
<b>Valerianaceae</b>	
<b>Valeriana</b>	
<i>Valeriana officinalis</i> L.	<i>Eur-Sib</i>
<sup>37</sup> <i>V. salina</i> Pleijel	<i>MNS, Scandinavian peninsula</i>
<i>V. tripteris</i> L.	<i>Eur</i>
<b>Woodsiaceae</b>	
<b>Athyrium</b>	
<i>Athyrium filix-femina</i> (L.) Roth	<i>Kos</i>
<b>Cystopteris</b>	
<i>Cystopteris fragilis</i> (L.) Bernh.	<i>Kos</i>

**Legend.** MNS - Mountain Natural Station of BAS; <sup>1</sup>Originated from an area of Ropotamo river; <sup>2</sup>Unknown origin; <sup>3</sup>Originated from Slavyanka Mt.; <sup>4</sup>Originated from Stara planina Mt.; <sup>5</sup>Originated from cape Kaliacra; <sup>6,7</sup>Originated from Golo Bardo Mt.; <sup>8</sup>Originated from Rhodope Mts.; <sup>9</sup>Originated from Varna district; <sup>10</sup>Originated from Golo Bardo Mt.; <sup>11</sup>Unknown origin; <sup>12</sup>Originated from Stara planina Mt.; <sup>13</sup>Originated from Strandzha Mt.; <sup>14</sup>Originated from Varna district; <sup>15</sup>Originated from Zemenska Mt.; <sup>16</sup>Originated from Batashko marsh; <sup>17</sup>Received from Hungary; <sup>18</sup>Alien species, unknown origin; <sup>19</sup>Originated from Balchik area; <sup>20</sup>Originated from Rhodope Mts.; <sup>21</sup>Originated from East Rhodope Mts.; <sup>22</sup>Unknown origin; <sup>23</sup>Originated from Strandzha Mt.; <sup>24</sup>Originated from Kyustendil district; <sup>25</sup>Originated from Varna district; <sup>26</sup>Originated from Varna district; <sup>27</sup>Originated from Burgas district; <sup>28</sup>Originated from Burgas district; <sup>29</sup>Originated from Varna district; <sup>30</sup>Originated from Burgas district; <sup>31</sup>Originated from Strandzha Mt.; <sup>32</sup>Originated from Rhodope Mts.; <sup>33</sup>Alien species; <sup>34</sup>Originated from Varna district; <sup>35</sup>Originated from Golo Bardo Mt.; <sup>36</sup>Originated from Sakar Mt.; <sup>37</sup>Originated from Finland; *\*Bal* - Balcan endemic; *\*Bul* - Bulgarian endemic; *\*BDL*-Biodiversity Law.