

FLORA OF HRASTOVIČKA GORA (PETRINJA CITY AREA)

MARIJA BUČAR & SVEN D. JELASKA*

Division of Botany, Department of Biology, Faculty of Science, University of Zagreb, Marulićev trg 20/II, HR-10000 Zagreb, Croatia (marijabucar0@gmail.com)

Bučar, M. & Jelaska, S. D.: Flora of Hrastovička Gora (Petrinja city area). *Nat. Croat.*, Vol. 31, No. 1, 79-96, Zagreb, 2022.

Hrastovička gora is the northernmost part of the hilly area of Zrinska Gora in Banovina (Sisak-Moslavina County). No systematic research on flora of this region was ever done. An inventory of the flora was conducted in 2020. In all, 433 plant taxa were found, belonging to 90 plant families. The most frequent families are *Fabaceae* (36 taxa), *Asteraceae* (35 taxa), *Lamiaceae* (31 taxa) and *Poaceae* (31 taxa). Analyses of chorological types, life forms and origin were made. The most common chorological type is Eurasian (40.1%), followed by European (14.8%) and Mediterranean (11.6%). Most taxa (80.1%) are of indigenous origin, but as many as 19 invasive plant species were recorded. Almost two-thirds of all taxa are either hemicryptophytes (44.2%) or geophytes (20.4%). Only one endemic species was found, namely *Helleborus atrorubens* Waldst. et Kit. A large number of endangered and strictly protected plant taxa were also recorded with 17 taxa being threatened and 14 taxa being strictly protected. Forests and thermophilous grasslands have been shown to be important habitats for endangered and strictly protected species and it is therefore crucial to keep a management regime that will conserve their favourable status, while preserving stable ecological conditions.

Key words: floristic analysis, biodiversity, Central Croatia

Bučar, M. & Jelaska, S. D.: Flora Hrastovičke gore (područje grada Petrinje). *Nat. Croat.*, Vol. 31, No. 1, 79-96, Zagreb, 2022.

Hrastovička gora najsjeverniji je dio brežuljkastog područja Zrinske gore u Banovini (Sisačko-moslavačka županija). Dosad nije napravljen sustavni popis flore Hrastovičke gore. Tijekom 2020. godine provedena su terenska istraživanja kojima je zabilježeno ukupno 433 biljnih svojiti unutar 90 porodica. Porodice najbrojnije svojitama su *Fabaceae* (36), *Asteraceae* (35), *Lamiaceae* (31) i *Poaceae* (31). Provedena je analiza flornih elemenata, životnih oblika i podrijetla. Najbrojniji florni element je euroazijski (40,1%) kojeg slijede europski (14,8%) i mediteranski (11,6%). Čak četiri petine svojiti je autohtonog podrijetla. Najzastupljeniji prema životnim oblicima su hemikriptofiti (44,2%) i geofiti (20,4%). Zabilježen je velik broj invazivnih vrsta (19) kao i velik broj ugroženih (17) i strogo zaštićenih vrsta (14). Jedini zabilježen endem je *Helleborus atrorubens* Waldst. et Kit. Šume i termofilni travnjaci pokazali su se kao bitna staništa za ugrožene i strogo zaštićene biljne vrste, stoga je neophodno zadržati upravljanje koje će osigurati njihovo povoljno stanje, uz održavanje stabilnih okolišnih uvjeta.

Ključne riječi: floristička analiza, bioraznolikost, središnja Hrvatska

INTRODUCTION

Hrastovička Gora is situated in the southern part of Central Croatia called Banovina. It is the northernmost extension of Zrinska Gora bordered by the city of Petrinja on its northeastern side with smaller settlements Hrastovica, Pecki, Cepeliš and others to the south. Hrastovička Gora owes its toponym to the Croatian name of the genus *Quercus* (Croatian hrast) which is the dominant plant taxa in its woodland plant associations (*As. Festuco drymeiae-Carpinetum* Vukelić (1990) 1991 and *As. Querco-Castaneetum sativae* Ht. 1938). The

whole area of Hrastovička Gora is a part of the Eurosiberian-Boreoamerica vegetation region (ALEGRO, 2015). The peak, Piramida, is at an elevation of 415 meters. Its climate is the same as that of the wider Zrinska Gora and is classified as a temperate oceanic climate. Average annual temperature in the highest parts is 7-8°C and the average annual rainfall is 1000-1400 millimetres. Since most of the area is well forested, the canopy dictates the microclimate of certain areas (BUČAR, 2010). Other than deciduous forests, many other vegetation types, such as vineyards, orchards, mesophilous and thermophilous grasslands, meadows, thickets, moist habitats and ruderal habitats are found in the lower parts of Hrastovička Gora (Map of terrestrial non-forest habitats of Croatia from 2016).

None of the floristic researches in this part of Croatia so far have been centred specifically around Hrastovička Gora. The first floristic checklist of Zrinska Gora was made more than 20 years ago (ŠEGULJA *et al.*, 1997) and it is not clear whether the researched area included Hrastovička Gora, or not. Another floristic research project into the forests was conducted 10 years ago, but also related to the wider area of Zrinska Gora and did not target Hrastovička Gora (ŠAPIĆ, 2012).

MATERIALS AND METHODS

The floristic survey of Hrastovička Gora took place from March of 2020 to April of 2021 as a part of a master's thesis (BUČAR, 2021) on the floristic and habitat diversity of the same area. The geographical position of the surveyed area is shown on a map (Fig. 1) with a closer depiction of the area (Fig. 2). An inventory of the plant taxa for the theses was made on different sampling sites among different habitat types, however, plants were also collected and inventoried outside of these sampling sites to gather more complete information for the floristic checklist of Hrastovička Gora. Plant taxa were identified and photographed *in situ* using fieldwork keys for identification such as DOMAC (1994) and NIKOLIĆ (2019).



Fig. 1. Geographical position of Hrastovička Gora

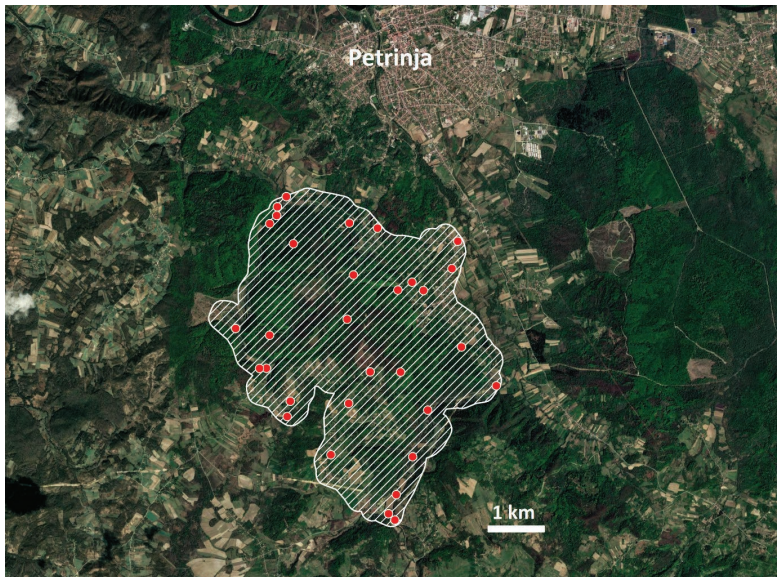


Fig. 2. A depiction of the surveyed area with sample site centroids (Hrastovička Gora)

Specimens which were not identified right away were collected, pressed and then later identified using more keys and iconographies (ALEGRO *et al.*, 2003; JAVORKA & CSAPODY, 1991; ROTHMALER, 2007; NIKOLIĆ & KOVAČIĆ, 2008; KOVAČIĆ *et al.*, 2008; EGGENBERG & MÖHL, 2007; LAUBER & WAGNER, 2001; FRANJIĆ & ŠKVORC, 2010, 2014). The nomenclature used is in accordance with Flora Croatica Database (FCD) (NIKOLIĆ, 2021).

The following floristic traits were attributed to each taxon: life-forms, chorological types and origin. When attributing life-forms, data from LANDOLT *et al.* (2010), ALEGRO *et al.* (2006), ZIMA *et al.* (2019) and FCD were used with the following categories and their abbreviations: c - chamaephytes, g - geophytes, h - hemicryptophytes, li - climbing plants, p - phanerophytes, t - therophytes and vp - parasites. The analysis on chorological type was made according to data provided by PIGNATTI (1982), ALEGRO *et al.* (2006), ZIMA *et al.* (2019) and LANDOLT *et al.* (2010). The following categories were used: Eurasian (europ-asiat), European (europ), Mediterranean (medit), Circumholarctic (circ-holarct), Central-European (C-europ), South-European (S-europ), South-East-European (SE-europ), Atlantic (atlant), Illyrian-Balkan (illyr-balc), Cosmopolites (cosmop) and adventive plants (adv). The information on the origin of each taxon (I - indigenous, A - archaeophyte and N - neophyte) drew on their status in the online database Biolflor (KLOTZ *et al.*, 2002) and also LANDOLT *et al.* (2010).

Information on whether individual taxa were invasive or endemic to Croatia referenced their status in the Flora Croatica Database - FCD (NIKOLIĆ, 2021). The status of endangerment was derived from the Red List of Vascular Flora of Croatia (NIKOLIĆ & TOPIĆ, 2005) following these categories: CR - Critically Endangered, EN - Endangered, VU - Vulnerable, NT - Near Threatened, LC - Least Concern and DD - Data Deficient. The legal protection of certain plant taxa in Croatia is defined in the Ordinance on Strictly Protected Species (OG 144/13, 73/16) which was used for attributing strict protection status to the taxa.

RESULTS

In total, 434 plant taxa (423 species, 9 subspecies and two to the level of genus) have been recorded in the flora of Hrastovička Gora (Appendix 1). Out of 90 plant families in total, most taxon-abundant families with over 30 taxa are *Fabaceae* (36 taxa), *Asteraceae* (35 taxa), *Lamiaceae* (31 taxa) and *Poaceae* (31 taxa) (Fig. 3). More than four fifths of recorded taxa are indigenous (80.1%) to the survey area (Fig. 4). Out of alien plants 11.0% are archaeophytes and 8.9% are neophytes. A high number of invasive plants (19 species) has been recorded (Tab. 1). Hemicryptophytes have prevailed as the dominant life-form (44.1%) followed by geophytes (20.6%) and therophytes (14.9%). Only one parasitic plant was found (*Cuscuta epithimum* (L.) L.) (Fig. 5). In terms of chorology, strongly dominant are Eurasiatic (40,3%) and European plants (14,7%) followed by Mediterranean plants (11,5%). The least represented chorological type is Illyrian-Balkan with only three taxa (*Cyclamen purpurascens* Mill., *Lamium orvala* L., *Cardamine trifolia* L.) (Fig. 6).

A large number of endangered and strictly protected species were recorded, 22 taxa in total, with 17 taxa being endangered and 14 taxa being strictly protected (Tab. 2). Only one strictly protected and endemic species was found, *Helleborus atrorubens* Waldst. et Kit., which has the status of least concern in the Red List (NIKOLIĆ & TOPIĆ, 2005).

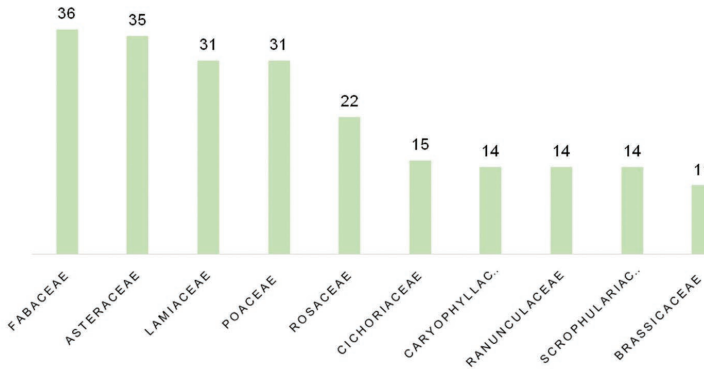


Fig. 3. Most taxon-abundant vascular plant families with the number of vascular plants taxa above each column (Hrastovička Gora)

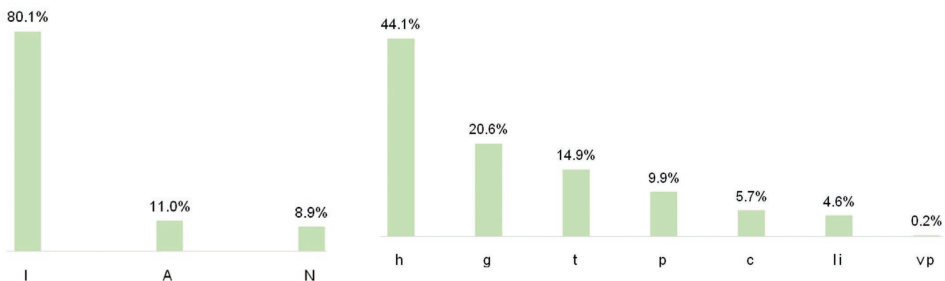


Fig. 4. Origin distribution in vascular plants taxa recorded on Hrastovička Gora

Fig. 5. Life-forms distribution in vascular plants taxa recorded on Hrastovička Gora (c – chamaephytes, g – geophytes, h – hemicryptophytes, li – climbing plants, p – phanerophytes, t – therophytes, vp – parasites)

Tab. 1. A list of invasive vascular plants species found on Hrastovička Gora

Invasive species	Invasive species
<i>Angelica archangelica</i> L.	<i>Helianthus tuberosus</i> L.
<i>Ailanthus altissima</i> (Mill.) Swingle	<i>Impatiens parviflora</i> DC.
<i>Ambrosia artemisiifolia</i> L.	<i>Panicum capillare</i> L.
<i>Amorpha fruticosa</i> L.	<i>Reynoutria japonica</i> Houtt.
<i>Asclepias syriaca</i> L.	<i>Robinia pseudoacacia</i> L.
<i>Bidens frondosus</i> L.	<i>Solidago canadensis</i> L.
<i>Conyza canadensis</i> (L.) Cronquist	<i>Solidago gigantea</i> Aiton
<i>Eleusine indica</i> (L.) Gaertn.	<i>Sorghum halepense</i> (L.) Pers.
<i>Erigeron annuus</i> (L.) Desf	<i>Veronica persica</i> Poir.
<i>Galinsoga parviflora</i> Cav.	



Fig. 6. Chorological types distribution in vascular plants taxa recorded on Hrastovička Gora (europ-asiat – Euroasiatic, europ – European, medit – Mediterranean, circ-holarct – Circumholarctic, C-europ – Central-European, S-europ – South-European, SE-europ – South-East-European, atlant – Atlantic, illyr-balc – Illyrian-Balkan, cosmop – cosmopolites, adv – adventive plants)

DISCUSSION

The results of this floristic analysis are comparable to similar researches of other Central Croatian localities. Compared to ŠEGULJA *et al.* (1997), who listed 682 taxa from research conducted from 1985 to 1987, a fairly smaller number of taxa was found (248 taxa fewer) due to the surveyed area being significantly smaller in size and also to the shorter time period in which the fieldwork was conducted. The most common chorological element in both ŠEGULJA *et al.* (1997) and the present paper is Eurasiatic, but a rise in its percentage (from 32.1% to 40.3%) is shown. Another difference is seen in the slightly lesser percentage of cosmopolites, the South-European and Illyrian-Balkan chorological types, but also a significant rise in the share of the Mediterranean chorological type (from 0.6% to 11.7%). The trend of fewer cosmopolites being recorded is also due to recent revisions of the chorological elements used in the past for some older research papers, so that we now have at our disposal more specific information on the chorological elements of some of these taxa (BUDIŠAVLJEVIĆ *et al.*, 2017). A rise in the Mediterranean chorological type could potentially be caused by a rise in the average annual temperature in the midst of global warming (www.climate.gov). Also, the large number of Mediterranean plants can be influenced by the number of warm, so-

Tab. 2. A list of endangered and strictly protected vascular plants species of Hrastovička Gora (CR – Critically Endangered, EN – Endangered, VU – Vulnerable, NT – Near Threatened, LC – Least Concern and DD – Data Deficient)

Taxon	IUCN category	Strictly protected
<i>Anacamptis pyramidalis</i> (L.) Rich	NT	+
<i>Cephalanthera damasonium</i> (Mill.) Druce	NT	+
<i>Cyclamen purpurascens</i> Mill.	NT	
<i>Daphne mezereum</i> L.	NT	
<i>Dianthus armeria</i> L.		+
<i>Dianthus barbatus</i> L.		+
<i>Epipactis helleborine</i> (L.) Crantz		+
<i>Epipactis purpurata</i> Sm.		+
<i>Eranthis hyemalis</i> (L.) Salisb.	NT	
<i>Galanthus nivalis</i> L.	LC	
<i>Helleborus atrorubens</i> Waldst. et Kit.	LC	+
<i>Iris pseudacorus</i> L.		+
<i>Lilium martagon</i> L.	VU	+
<i>Ophioglossum vulgatum</i> L.	NT	
<i>Ophrys apifera</i> Huds.	EN	+
<i>Ophrys fuciflora</i> (F. W. Schmidt) Moench	VU	+
<i>Orchis purpurea</i> Huds.	VU	+
<i>Orchis tridentata</i> Scop.	VU	+
<i>Platanthera bifolia</i> (L.) Rich.	VU	+
<i>Poa palustris</i> L.	NT	
<i>Ruscus aculeatus</i> L.	LC	
<i>Ruscus hypoglossum</i> L.	NT	

uth-exposed grasslands found on Hrastovička Gora that are a suitable open-type habitat for these plant taxa. These Mediterranean plants are a part of a wider understanding of the Mediterranean chorological type, plants originating from the Mediterranean region but now constituting a part of the local flora as rural and weed species (ALEGRO *et al.*, 2013). Recorded life-forms show a similarity to those found by ŠEGULJA *et al.* (1997) in the dominance of hemicryptophytes and also geophytes and therophytes. A concerning difference between these two papers that are chronologically separated by less than 25 years is the ten newly recorded invasive species, as this is indicative of an expansion of the distribution of invasive species.

When this investigation is compared to that of ŠAPIĆ (2012), certain expected differences are seen. First of all, a higher number of taxa were found as not only forests, but other, open, habitats were being sampled. Secondly, hemicryptophytes are most frequent in both checklists, but in ŠAPIĆ (2012) the second and third most abundant life-forms are phanerophytes and geophytes, because this research focused (as previously mentioned) on forests. Most common chorological types are once again Eurasian and European, and a similarity was shown in a smaller share of cosmopolites when compared to ŠEGULJA *et al.* (1997). ŠAPIĆ (2012) also recorded a lot of endangered and strictly protected species. Also, these two checklists overlap in 10 endangered and

strictly protected species, which emphasizes the importance and suitability of forests as a stable and undisturbed habitat type.

The dominance of certain plant families (*Asteraceae*, *Poaceae*, *Fabaceae* and *Lamiaceae*) is expected in accordance with ALEGRO *et al.* (2006) in an analysis of the area of Vukova gorica, a geographically similar area, with the same climate and a diverse set of habitats.

In comparison to another similar research project (MIHELIC & ALEGRO, 2018), that of the area of Bregana, almost twice as many invasive taxa were recorded and the only endemic species in both research works is *Helleborus atrorubens* Waldst. et Kit.

It is worth mentioning that almost all endangered and strictly protected species are found in either forests or grasslands with thermophilous conditions. This is interesting because the most important factor for those species inhabiting forests is the lack of anthropogenic disturbance, whereas on the grasslands, these plants are dependent specifically of anthropogenic disturbance in the form of mowing and preventing succession, so maintaining vegetation structure.

CONCLUSION

The flora of Hrastovička Gora is diverse, with a recorded number of 434 plant taxa belonging to 90 plant families. The dominant life-form is shown to be the hemicryptophyte, followed by geophytes and therophytes, and the prevailing chorological types are Eurasiatic, European and Mediterranean. Most plants are indigenous by origin. A large number of invasive plants were found, probably as result of the high anthropogenic disturbance in certain areas. Forests and thermophilous grasslands have been shown to be important habitats for endangered and strictly protected species and it is therefore crucial that they be managed in such a way as to conserve their good status, while preserving stable ecological conditions.

Acknowledgements

We would like to thank Vedran Šegota, Anja Rimac and Nina Vuković for their generous help with identifying some of the vascular plant taxa recorded in this research.

Received August 1, 2021

REFERENCES

- ALEGRO, A., 2015: Vegetacija Hrvatske, interna skripta, Botanički zavod PMF-a, Zagreb.
- ALEGRO, A., BOGDANOVIĆ, S. & NIKOLIĆ T., 2003: Ključevi za određivanje svojiti kritičnih skupina, Botanički zavod PMF-a, Interna verzija, Zagreb.
- ALEGRO, A., BOGDANOVIĆ, S., REŠETNIK, I., BORŠIĆ, I., CIGIĆ, P. & NIKOLIĆ, T., 2013: Flora of the seminatural marshland Savica, part of the (sub)urban flora of the city of Zagreb (Croatia). *Nat. Croat.*, **22**(1), 111–134, 2013, Zagreb.
- ALEGRO, A., MARKOVIĆ LJ., ANTONIĆ O. & BOGDANOVIĆ S., 2006: Historical and functional aspects of plant biodiversity – an example on the flora of the Vukova Gorica region (Central Croatia), *Journal international de botanique systématique, Candollea* **61**, 135-166.
- BUČAR, M. (ed.) 2010: Zrinska gora regionalni park prirode. Grad Petrinja, Matica hrvatska ogranak Petrinja, Sisačko-moslavačka županija, Sveučilište u Zagrebu, Učiteljski fakultet – Odsjek Petrinja, Petrinja.
- BUČAR, M., 2021: Floristička i stanišna raznolikost Hrastovičke gore, Diplomski rad, Prirodoslovno-matematički fakultet Sveučilišta u Zagrebu

- BUDISAVLJEVIĆ, A., TERLEVIĆ, A., MIHELIĆ, P., ŠPADINA, B., PAPIKOVIĆ, D., NIKOLIĆ, T., ŠEGOTA, V., 2017: Vaskularna flora šume Dotršćina (Zagreb, Hrvatska). *Glas. Hrvat. bot. društ.* **5**(1), 4-19.
- DOMAC, R., 1994: Flora Hrvatske – priručnik za određivanje bilja, Školska knjiga, Zagreb.
- EGGENBERG, S. & MÖHL, A., 2007: Flora Vegetativa – Ein Bestimmungsbuch für Pflanzen der Schweiz im blütenlosen Zustand, Haupt Verlag, Bern; Stuttgart; Wien.
- FRANJIC, J. & ŠKVRČ, Ž., 2010: Šumsko drveće i gmlje Hrvatske, Sveučilište u Zagrebu – Šumarski fakultet, Zagreb.
- FRANJIC, J. & ŠKVRČ, Ž., 2014: Šumsko zeljasto bilje Hrvatske, Sveučilište u Zagrebu – Šumarski fakultet, Zagreb.
- JAVORKA, S. & CSAPODY V., 1991: *Iconographia florum partis austro-orientalis Europae centralis*, Akademiai Kiado, Budapest.
- KLOTZ, S., KÜHN, I. & DURKA, W. [Hrsg.], 2002: BIOLFLOR- Eine Datenbank zu biologisch-ökologischen Merkmalen der Gefäßpflanzen in Deutschland, Schriftenreihe für Vegetationskunde 38, Bonn: Bundesamt für Naturschutz, ISBN-13 978-3-7843-3508-7.
- KOVAČIĆ, S., NIKOLIĆ, T., RUŠČIĆ M., MILOVIĆ M., STAMENKOVIĆ V., MIHELJ D., JASPRICA N., BOGDANOVIĆ S. & TOPIĆ J., 2008: Flora jadranske obale i otoka – 250 najčešćih vrsta, Školska knjiga, Zagreb.
- LANDOLT, E., BÄUMLER, B., ERHARDT A., HEGG O., KLÖTZLI F., LÄMLER W., NOBIS M., RUDMANN-MAURER K., SCHWEINGRUBER F. H., THEURILLAT J., URMI E., VUST M., WOHLGEMUTH T., 2010: *Flora indicativa - Ökologische Zeigerwerte und biologische Kennzeichen zur Flora der Schweiz und der Alpen*, Haupt Verlag, Bern; Stuttgart; Wien.
- LAUBER, K. & WAGNER G., 2001: *Flora Helvetica - 3000 Blüten- und Farnpflanzen der Schweiz*, Artbeschreibungen und Bestimmungsschlüssel, 3. Auflage, Haupt Verlag, Bern; Stuttgart; Wien.
- MIHELIĆ, P. & ALEGRO A., 2018: Fitogeografske značajke naselja Bregane. *Acta Geogr. Croatica*, **43/44** (2016./2017.), 21-36.
- NIKOLIĆ, T., 2019: *Flora Croatica – Vaskularna flora Republike Hrvatske*, Vol. 4., Alfa d.d., Zagreb.
- NIKOLIĆ, T., 2021: *Flora Croatica Database* (<http://hirc.botanic.hr/fcd>), Botanički zavod, Prirodoslovno-matematički fakultet Sveučilišta u Zagrebu.
- NIKOLIĆ, T. & KOVAČIĆ, S., 2008: *Flora Medvednice*, Školska knjiga, Zagreb.
- NIKOLIĆ, T. & TOPIĆ, J., 2005: *Crvena knjiga vaskularne flore Hrvatske*, Ministarstvo kulture Republike Hrvatske – Državni zavod za zaštitu prirode, Zagreb.
- PIGNATTI, S. (ed.) 1982: *Flora D'Italia 1-3. Edagricole*, Bologna
- ROTHMALER, W., 2007: *Exkursionsflora von Deutschland 3 – Gefasspflanzen: Atlasband*. Elsevier GmbH, Munchen.
- ŠAPIĆ, I., 2012: *Šumska vegetacija Zrinske gore*, Doktorska disertacija, Šumarski fakultet, Zagreb.
- ŠEGULJA, N., ILJANIĆ LJ. & MARKOVIĆ LJ., 1997: Prikaz i analiza flore Zrinske gore, *Acta Botanica Croatica*, Vol. 55-56, No. 1. Zagreb.
- ZIMA, D., ŠTEFANIĆ E. & KOVAČEVIĆ, V., 2019: Florni sastav suhog travnjaka na području Rudine, *Zbornik Sveučilišta u Rijeci*, **7**(1), pp. 411-424
- <https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature> (accessed 15th of January 2021)

Appendix 1. A checklist of vascular plants taxa recorded on Hrastovička Gora (c - chamaephytes, g - geophytes, h - hemicytrophytes, li - climbing plants, p - phanerophytes, t - therophytes, vp - parasites, europ-asiat - Euroasiatic, europ - European, medit - Mediterranean, circ-holarct - Circumholarctic, C-europ - Central-European, S-europ - South-European, SE-europ - South-East-European, atlant - Atlantic, illyr-balc - Illyrian-Balkan, cosmop - cosmopolites, adv - adventive plants, I - indigenous, A - archaeophyte and N - neophyte)

Family	Taxon	Chorological type	Life form	Origin
Aceraceae	<i>Acer campestre</i> L.	europ	p	I
	<i>Acer obtusatum</i> Willd.	SE-europ	p	I
	<i>Acer platanoides</i> L.	europ	p	I
	<i>Acer pseudoplatanus</i> L.	europ	p	I
Adoxaceae	<i>Adoxa moschatellina</i> L.	circ-holarct	g	I
Alismataceae	<i>Alisma plantago-aquatica</i> L.	cosmop	g	I
Amaryllidaceae	<i>Allium carinatum</i> L.	atlant	g	I
	<i>Allium ursinum</i> L.	europ-asiat	g	I
	<i>Galanthus nivalis</i> L.	europ	g	I
	<i>Leucojum aestivum</i> L.	europ	g	N
Apiaceae	<i>Aegopodium podagraria</i> L.	europ-asiat	h	I
	<i>Aethusa cynapium</i> L.	europ-asiat	t	A
	<i>Angelica archangelica</i> L.	circ-holarct	h	A
	<i>Daucus carota</i> L.	europ-asiat	h	I
	<i>Heracleum sphondylium</i> L.	europ-asiat	h	I
	<i>Pastinaca sativa</i> L.	europ-asiat	h	I
	<i>Peucedanum carvifolia</i> Vill.	europ	h	I
	<i>Pimpinella major</i> (L.) Huds.	europ	h	I
	<i>Sanicula europaea</i> L.	europ-asiat	h	I
<i>Torilis arvensis</i> (Huds.) Link	cosmop	t	A	
Apocynaceae	<i>Vinca minor</i> L.	C-europ	c	A
Araceae	<i>Arum maculatum</i> L.	C-europ	g	I
Araliaceae	<i>Hedera helix</i> L.	medit	p, li	I
Aristolochiaceae	<i>Aristolochia clematitis</i> L.	medit	g	A
	<i>Aristolochia pallida</i> Willd.	medit	g	I
	<i>Asarum europaeum</i> L.	europ-asiat	g	I
Asclepiadaceae	<i>Asclepias syriaca</i> L.	atlant	g	N
	<i>Vincetoxicum hirundinaria</i> Medik.	europ-asiat	g, li	I
Asparagaceae	<i>Ornithogalum pyramidale</i> L.	europ-asiat	g	N
	<i>Ornithogalum umbellatum</i> L.	medit	g	I
	<i>Polygonatum multiflorum</i> (L.) All.	europ-asiat	g	I
	<i>Polygonatum odoratum</i> (Mill.) Druce	circ-holarct	g	I
	<i>Ruscus aculeatus</i> L.	medit	c	I
	<i>Ruscus hypoglossum</i> L.	medit	c	I
Aspleniaceae	<i>Asplenium adiantum-nigrum</i> L.	europ-asiat	h	I
	<i>Asplenium scolopendrium</i> L.	circ-holarct	h	I
	<i>Asplenium trichomanes</i> L.	cosmop	h	I
Asteraceae	<i>Achillea millefolium</i> L.	europ-asiat	h	I
	<i>Ambrosia artemisiifolia</i> L.	adv	t	N
	<i>Anthemis arvensis</i> L.	medit	t	A
	<i>Arctium lappa</i> L.	europ-asiat	h	A

Family	Taxon	Chorological type	Life form	Origin
Asteraceae	<i>Arctium minus</i> (Hill) Bernh.	medit	h	I
	<i>Arctium tomentosum</i> Mill.	europ-asiat	h	A
	<i>Artemisia vulgaris</i> L.	circ-holarct	c	I
	<i>Bellis perennis</i> L.	europ	h	A
	<i>Bidens frondosus</i> L.	adv	t	N
	<i>Buphthalmum salicifolium</i> L.	SE-europ	h	I
	<i>Carpesium abrotanoides</i> L.	europ-asiat	h	
	<i>Centaurea jacea</i> L.	europ-asiat	h	I
	<i>Centaurea nigrescens</i> Willd.	S-europ	h	N
	<i>Centaurea scabiosa</i> L.	europ-asiat	h	I
	<i>Chamomilla recutita</i> (L.) Rauschert		t	A
	<i>Cirsium arvense</i> (L.) Scop.	europ-asiat	g	I
	<i>Cirsium oleraceum</i> (L.) Scop.	europ-asiat	h	I
	<i>Cirsium palustre</i> (L.) Scop.	europ-asiat	h	I
	<i>Cirsium vulgare</i> (Savi) Ten.	europ-asiat	h	I
	<i>Conyza canadensis</i> (L.) Cronquist	adv	t	N
	<i>Erigeron annuus</i> (L.) Desf	adv	t	N
	<i>Eupatorium cannabinum</i> L.	europ-asiat	h	I
	<i>Galinsoga parviflora</i> Cav.	adv	t	N
	<i>Helianthus tuberosus</i> L.	adv	g	N
	<i>Inula helenium</i> L.	SE-europ	h	N
	<i>Leucanthemum vulgare</i> Lam.	europ-asiat	h	I
	<i>Petasites hybridus</i> (L.) P. Gaertn. , B. Mey. et Schreb.	europ-asiat	g	I
	<i>Pulicaria dysenterica</i> (L.) Bernh.	medit	g	I
	<i>Senecio aquaticus</i> Hill	C-europ	h	I
	<i>Senecio jacobaea</i> L.	europ-asiat	h	I
	<i>Solidago canadensis</i> L.	adv	h	N
	<i>Solidago gigantea</i> Aiton	adv	h	N
<i>Solidago virgaurea</i> L.	circ-holarct	h	I	
<i>Xanthium strumarium</i> L.	adv	t	I	
<i>Tussilago farfara</i> L.	europ-asiat	g	I	
Balsaminaceae	<i>Impatiens parviflora</i> DC.	adv	t	N
Berberidaceae	<i>Epimedium alpinum</i> L.	SE-europ	g	N
Betulaceae	<i>Betula pendula</i> Roth	europ-asiat	p	I
	<i>Alnus glutinosa</i> (L.) Gaertn.	europ-asiat	p	I
Boraginaceae	<i>Cerinthe minor</i> L. ssp. <i>minor</i>	SE-europ	h	I
	<i>Echium vulgare</i> L.	europ	h	A
	<i>Lithospermum purpureoaceruleum</i> L.		h	I
	<i>Myosotis arvensis</i> (L.) Hill	europ	h	A
	<i>Myosotis scorpioides</i> L.	europ	h	I
	<i>Myosotis sylvatica</i> Hoffm.	europ-asiat	h	I
	<i>Pulmonaria officinalis</i> L.	C-europ	h	I
	<i>Symphytum officinale</i> L.	europ	h	I
<i>Symphytum tuberosum</i> L.	SE-europ	g	I	
Brassicaceae	<i>Alliaria petiolata</i> (M. Bieb.) Cavara et Grande	europ-asiat	h	I
	<i>Brassica rapa</i> L.	medit	t	N
	<i>Capsella bursa-pastoris</i> (L.) Medik.	cosmop	h	I

Family	Taxon	Chorological type	Life form	Origin
Brassicaceae	<i>Cardamine bulbifera</i> (L.) Crantz	C-europ	g	I
	<i>Cardamine impatiens</i> L.	europ-asiat	t	I
	<i>Cardamine pratensis</i> L.	europ	h	I
	<i>Cardamine trifolia</i> L.	illyr-balc	g	I
	<i>Cardaminopsis arenosa</i> (L.) Hayek	europ	h	I
	<i>Hesperis sylvestris</i> Crantz		h	I
	<i>Lunaria rediviva</i> L.	europ	h	I
	<i>Rorippa sylvestris</i> (L.) Besser	europ-asiat	h	I
Campanulaceae	<i>Campanula bononiensis</i> L.	europ-asiat	h	I
	<i>Campanula latifolia</i> L.	europ	h	I
	<i>Campanula patula</i> L.	europ-asiat	h	I
	<i>Campanula persicifolia</i> L.	europ-asiat	h	I
	<i>Campanula rapunculoides</i> L.	europ	g	I
	<i>Campanula trachelium</i> L.	europ-asiat	h	I
Cannabaceae	<i>Humulus lupulus</i> L.	europ	h, li	I
Caprifoliaceae	<i>Sambucus ebulus</i> L.	medit	g	I
	<i>Viburnum lantana</i> L.	C-europ	p	I
	<i>Viburnum opulus</i> L.	europ-asiat	p	I
Caryophyllaceae	<i>Arenaria serpyllifolia</i> L.	cosmop	t	I
	<i>Cerastium brachypetalum</i> Pers.	medit	t	I
	<i>Cerastium glomeratum</i> Thuill.	medit	t	A
	<i>Cucubalus baccifer</i> L.	europ-asiat	g	I
	<i>Dianthus armeria</i> L.	europ	h	I
	<i>Dianthus barbatus</i> L.	S-europ	h	N
	<i>Lychnis flos-cuculi</i> L.	europ-asiat	h	I
	<i>Saponaria officinalis</i> L.	europ-asiat	h	I
	<i>Silene latifolia</i> Poir.	medit	h, t	I
	<i>Silene latifolia</i> Poir. ssp. <i>alba</i> (Mill.) Greuter et Bourdet	medit	h	I
	<i>Silene nutans</i> L.	europ-asiat	h	I
	<i>Silene vulgaris</i> (Moench) Garcke	europ-asiat	h	I
	<i>Stellaria holostea</i> L.	europ	c	I
	<i>Stellaria media</i> (L.) Vill.	cosmop	t	I
Celastraceae	<i>Euonymus europaeus</i> L.	europ-asiat	p	I
Chenopodiaceae	<i>Chenopodium album</i> L.	cosmop	t	A
Cichoriaceae	<i>Aposeris foetida</i> (L.) Less.	SE-europ	h	I
	<i>Cichorium intybus</i> L.	europ-asiat	h	A
	<i>Crepis biennis</i> L.	C-europ	h	A
	<i>Crepis nicaeensis</i> Pers.	europ-asiat	h	N
	<i>Hieracium pilosella</i> L.	europ	h	I
	<i>Hieracium sabaudum</i> L.	europ	h	I
	<i>Hieracium</i> sp.			
	<i>Lactuca sativa</i> L.	adv	t	A
	<i>Leontodon hispidus</i> L.	europ	h	I
	<i>Mycelis muralis</i> (L.) Dumort.	europ	h	I
	<i>Picris hieracioides</i> L.	europ-asiat	h	I
	<i>Sonchus arvensis</i> L.	europ-asiat	g	I
	<i>Sonchus asper</i> (L.) Hill	europ-asiat	t	I

Family	Taxon	Chorological type	Life form	Origin
Cichoriaceae	<i>Taraxacum officinale</i> F. H. Wigg.	circ-holarct	h	I
	<i>Tragopogon pratensis</i> L. ssp. <i>pratensis</i>	europ-asiat	h	I
Cistaceae	<i>Helianthemum nummularium</i> (L.) Mill.	europ	c	I
	<i>Helianthemum nummularium</i> (L.) Mill. ssp. <i>glabrum</i> (W. D. J. Koch) Wilczek	europ	c	I
Clusiaceae	<i>Hypericum perforatum</i> L.	europ-asiat	h	I
	<i>Hypericum tetrapterum</i> Fr.	europ-asiat	h	I
Colchicaceae	<i>Colchicum autumnale</i> L.	C-europ	g	I
Convolvulaceae	<i>Calystegia sepium</i> (L.) R. Br.	europ-asiat	g, li	I
	<i>Convolvulus arvensis</i> L.	europ-asiat	g, li	I
Cornaceae	<i>Cornus mas</i> L.	europ-asiat	p	I
	<i>Cornus sanguinea</i> L.	europ-asiat	p	I
Corylaceae	<i>Carpinus betulus</i> L.	europ	p	I
	<i>Corylus avellana</i> L.	europ	p	I
Crassulaceae	<i>Sedum sexangulare</i> L.	C-europ	c	I
Cucurbitaceae	<i>Bryonia dioica</i> Jacq.	medit	h, li	I
Cupressaceae	<i>Juniperus communis</i> L.	circ-holarct	p	I
Cuscutaceae	<i>Cuscuta epithymum</i> (L.) L.	europ-asiat	t, li, vp	I
Cyperaceae	<i>Carex distans</i> L.	medit	h	I
	<i>Carex divulsa</i> Stokes	medit	h	I
	<i>Carex flacca</i> Schreb. ssp. <i>flacca</i>	europ	g	I
	<i>Carex hirta</i> L.	europ	h	I
	<i>Carex muricata</i> L.		h	I
	<i>Carex pendula</i> Huds.	europ-asiat	h	I
	<i>Carex spicata</i> Huds.		h	I
	<i>Carex sylvatica</i> Huds.	europ	h	I
Dioscoreaceae	<i>Tamus communis</i> L.	medit	g, li	I
Dipsacaceae	<i>Dipsacus fullonum</i> L.	medit	h	A
	<i>Dipsacus laciniatus</i> L.	SE-europ	h	N
	<i>Dipsacus pilosus</i> L.	europ-asiat	h	I
	<i>Knautia arvensis</i> (L.) Coult.	europ-asiat	h	I
	<i>Knautia drymeia</i> Heuff.	SE-europ	h	I
	<i>Knautia drymeia</i> Heuff. ssp. <i>drymeia</i>	SE-europ	h	I
	<i>Knautia drymeia</i> Heuff. ssp. <i>intermedia</i> (Pernh. et Wettst.) Ehrend.	SE-europ	h	I
	<i>Scabiosa columbaria</i> L.	europ-asiat	h	I
Dryopteridaceae	<i>Dryopteris filix-mas</i> (L.) Schott	cosmop	h	I
	<i>Polystichum aculeatum</i> (L.) Roth	europ-asiat	h	I
	<i>Polystichum setiferum</i> (Forssk.) Woyn.	circ-holarct	h	I
Equisetaceae	<i>Equisetum arvense</i> L.	circ-holarct	g	I
	<i>Equisetum palustre</i> L.	circ-holarct	g	I
	<i>Equisetum pratense</i> Ehrh.	circ-holarct	g	I
	<i>Equisetum telmateia</i> Ehrh.	circ-holarct	g	I
Euphorbiaceae	<i>Euphorbia amygdaloides</i> L.	europ	c	I
	<i>Euphorbia cyparissias</i> L.	C-europ	h	I
	<i>Euphorbia dulcis</i> L.	C-europ	g	I

Family	Taxon	Chorological type	Life form	Origin
Euphorbiaceae	<i>Euphorbia epithymoides</i> L.		h	I
	<i>Euphorbia helioscopia</i> L.	cosmop	t	A
	<i>Euphorbia platyphyllos</i> L.	medit	t	I
	<i>Euphorbia verrucosa</i> L.		h	I
	<i>Euphorbia virgata</i> Waldst. et Kit.		h	N
	<i>Mercurialis perennis</i> L.	europ	g	I
Fabaceae	<i>Amorpha fruticosa</i> L.	adv	p	N
	<i>Anthyllis vulneraria</i> L.	medit	h	
	<i>Astragalus glycyphyllos</i> L.	europ-asiat	h	I
	<i>Chamaecytisus supinus</i> (L.) Link		c	I
	<i>Coronilla varia</i> L.	europ-asiat	t	I
	<i>Cytisus villosus</i> Pourr.	medit	p	I
	<i>Dorycnium herbaceum</i> Vill.		c	I
	<i>Genista germanica</i> L.	C-europ	c	I
	<i>Genista tinctoria</i> L.	europ-asiat	c	I
	<i>Lathyrus aphaca</i> L.	medit	t, li	A
	<i>Lathyrus latifolius</i> L.	europ-asiat	g, li	N
	<i>Lathyrus pratensis</i> L.	europ-asiat	g	I
	<i>Lathyrus tuberosus</i> L.	europ-asiat	g, li	I
	<i>Lathyrus venetus</i> (Mill.) Wohlf.	europ-asiat	g	I
	<i>Lathyrus vernus</i> (L.) Bernh.	europ-asiat	g	I
	<i>Lembotropis nigricans</i> (L.) Griseb. ssp. <i>nigricans</i>	europ-asiat	p	I
	<i>Lotus corniculatus</i> L.	europ-asiat	h	I
	<i>Medicago falcata</i> L.		h	I
	<i>Medicago lupulina</i> L.	europ-asiat	t	I
	<i>Medicago sativa</i> L.	europ-asiat	h	A
	<i>Melilotus albus</i> Medik.	europ-asiat	h	A
	<i>Melilotus officinalis</i> (L.) Lam.	europ-asiat	t	A
	<i>Melittis melissophyllum</i> L.	C-europ	h	I
	<i>Ononis arvensis</i> L.	europ-asiat	h	N
	<i>Ononis spinosa</i> L.	medit	c	I
	<i>Robinia pseudoacacia</i> L.	adv	p	N
	<i>Trifolium arvense</i> L.	europ-asiat	t	I
	<i>Trifolium campestre</i> Schreb.	europ-asiat	t	I
	<i>Trifolium hybridum</i> L.	medit	h	I
	<i>Trifolium medium</i> L.	europ	h	I
	<i>Trifolium pratense</i> L.	europ-asiat	h	I
	<i>Trifolium repens</i> L.	europ-asiat	h	I
<i>Vicia cracca</i> L.	europ-asiat	h, li	I	
<i>Vicia pannonica</i> Crantz	medit	t, li	N	
<i>Vicia sativa</i> L.	medit	t, li	A	
<i>Vicia sativa</i> L. ssp. <i>cordata</i> (Hoppe) Batt.	medit	t, li	I	
Fagaceae	<i>Castanea sativa</i> Mill.	SE-europ	p	A
	<i>Fagus sylvatica</i> L.	C-europ	p	I
	<i>Quercus petraea</i> (Matt.) Liebl.	europ	p	I
	<i>Quercus pubescens</i> Willd.	SE-europ	p	I
	<i>Quercus robur</i> L.	europ	p	I

Family	Taxon	Chorological type	Life form	Origin
Fumariaceae	<i>Corydalis bulbosa</i> (L.) DC.	europ	g	I
	<i>Corydalis solida</i> (L.) Clairv.	C-europ	g	I
Gentianaceae	<i>Centaurium erythraea</i> Rafn	europ-asiat	t	I
Geraniaceae	<i>Geranium columbinum</i> L.	europ-asiat	t	A
	<i>Geranium molle</i> L.	europ-asiat	t	A
	<i>Geranium phaeum</i> L.	S-europ	h	I
	<i>Geranium robertianum</i> L.	cosmop	t	I
Globulariaceae	<i>Globularia punctata</i> Lapeyr.	europ-asiat	h	I
Hypolepidaceae	<i>Pteridium aquilinum</i> (L.) Kuhn	cosmop	g	I
Iridaceae	<i>Crocus vernus</i> (L.) Hill		g	I
	<i>Iris pseudacorus</i> L.	europ-asiat	h	I
Juncaceae	<i>Juncus effusus</i> L.	cosmop	h	I
	<i>Juncus inflexus</i> L.	europ-asiat	h	I
	<i>Luzula campestris</i> (L.) DC.	europ	h	I
	<i>Luzula pilosa</i> (L.) Willd.	circ-holarct	h	I
Lamiaceae	<i>Ajuga reptans</i> L.	europ	h	I
	<i>Betonica officinalis</i> L.		h	I
	<i>Calamintha grandiflora</i> (L.) Moench	S-europ	g	I
	<i>Clinopodium vulgare</i> L.	circ-holarct	g	I
	<i>Galeopsis pubescens</i> Besser	C-europ	t	I
	<i>Galeopsis segetum</i> Neck.	atlant	t	I
	<i>Galeopsis speciosa</i> Mill.	europ-asiat	t	I
	<i>Galeopsis tetrahit</i> L.	europ-asiat	t	I
	<i>Glechoma hederacea</i> L.	circ-holarct	h	I
	<i>Glechoma hirsuta</i> Waldst. et Kit.	SE-europ	h	I
	<i>Lamium galeobdolon</i> (L.) Crantz	europ	c	I
	<i>Lamium maculatum</i> (L.) L.	europ-asiat	h	I
	<i>Lamium orvala</i> L.	illyr-balc	h	I
	<i>Lamium purpureum</i> L.	europ-asiat	t	A
	<i>Lycopus europaeus</i> L.	europ-asiat	g	I
	<i>Marrubium incanum</i> Desr.	medit	c	
	<i>Melissa officinalis</i> L.	medit	h	A
	<i>Mentha aquatica</i> L.	europ-asiat	g	I
	<i>Mentha arvensis</i> L.	circ-holarct	h	I
	<i>Mentha longifolia</i> (L.) L.	europ-asiat	h	I
	<i>Mentha spicata</i> L.	medit	g	N
	<i>Origanum vulgare</i> L.	europ-asiat	h	I
	<i>Prunella vulgaris</i> L.	circ-holarct	h	I
	<i>Salvia glutinosa</i> L.	europ-asiat	h	I
	<i>Salvia pratensis</i> L.	medit	h	I
	<i>Salvia verticillata</i> L.	S-europ	h	N
	<i>Stachys palustris</i> L.	circ-holarct	g	I
<i>Stachys recta</i> L.	S-europ	c	I	
<i>Stachys sylvatica</i> L.	europ-asiat	h	I	
<i>Teucrium chamaedrys</i> L.	medit	c	I	
<i>Thymus pulegioides</i> L.	europ-asiat	c	I	

Family	Taxon	Chorological type	Life form	Origin
Liliaceae	<i>Gagea lutea</i> (L.) Ker Gawl.	europ-asiat	g	I
	<i>Lilium martagon</i> L.	europ-asiat	g	I
Linaceae	<i>Linum tenuifolium</i> L.	europ-asiat	h	I
	<i>Linum usitatissimum</i> L.	adv	t	A
Loranthaceae	<i>Loranthus europaeus</i> Jacq.	europ-asiat	p	I
Lythraceae	<i>Lythrum salicaria</i> L.	cosmop	h	I
Malvaceae	<i>Althaea cannabina</i> L.	europ-asiat	h	N
	<i>Malva alcea</i> L.	C-europ	h	A
	<i>Malva sylvestris</i> L.	europ-asiat	h	A
Melanthiaceae	<i>Paris quadrifolia</i> L.	europ-asiat	g	I
Oleaceae	<i>Fraxinus ornus</i> L.	europ-asiat	p	N
	<i>Ligustrum vulgare</i> L.	europ	p	I
Onagraceae	<i>Circaea lutetiana</i> L.	circ-holarct	g	I
	<i>Epilobium parviflorum</i> Schreb.	europ-asiat	h	I
Ophioglossaceae	<i>Ophioglossum vulgatum</i> L.	circ-holarct	g	I
Orchidaceae	<i>Anacamptis pyramidalis</i> (L.) Rich	medit	g	I
	<i>Cephalanthera damasonium</i> (Mill.) Druce	medit	g	I
	<i>Epipactis helleborine</i> (L.) Crantz	europ-asiat	g	I
	<i>Epipactis purpurata</i> Sm.		g	I
	<i>Ophrys apifera</i> Huds.	medit	g	I
	<i>Ophrys fuciflora</i> (F. W. Schmidt) Moench	medit	g	
	<i>Orchis purpurea</i> Huds.	europ-asiat	g	I
	<i>Orchis tridentata</i> Scop.	medit	g	I
	<i>Platanthera bifolia</i> (L.) Rich.	europ-asiat	g	I
Orobanchaceae	<i>Orobanche gracilis</i> Sm.	europ	g	I
Oxalidaceae	<i>Oxalis corniculata</i> L	medit	h	N
Papaveraceae	<i>Papaver rhoeas</i> L.	cosmop	t	A
Pinaceae	<i>Pinus nigra</i> J. F. Arnold	medit	p	N
	<i>Pinus sylvestris</i> L.	europ-asiat	p	I
Plantaginaceae	<i>Plantago lanceolata</i> L.	europ-asiat	h	A
	<i>Plantago major</i> L.	europ-asiat	h	I
	<i>Plantago media</i> L.	europ-asiat	h	I
Poaceae	<i>Phragmites australis</i> (Cav.) Steud.	cosmop	g	I
	<i>Agrostis capillaris</i> L.		h	I
	<i>Agrostis gigantea</i> Roth	circ-holarct	h	I
	<i>Alopecurus pratensis</i> L.	europ-asiat	h	I
	<i>Anthoxanthum odoratum</i> L.	europ-asiat	h	I
	<i>Brachypodium pinnatum</i> (L.) P. Beauv.	europ-asiat	h	I
	<i>Brachypodium sylvaticum</i> (Huds.) P. Beauv.	europ-asiat	h	I
	<i>Briza media</i> L.	europ-asiat	h	I
	<i>Bromus erectus</i> Huds.	europ-asiat	h	I
	<i>Bromus hordeaceus</i> L.	cosmop	t	I
	<i>Bromus sterilis</i> L.	medit	t	A
	<i>Calamagrostis epigejos</i> (L.) Roth	europ-asiat	g	I
	<i>Cynosurus cristatus</i> L.	europ	h	I

Family	Taxon	Chorological type	Life form	Origin
Poaceae	<i>Dactylis glomerata</i> L.	europ-asiat	h	I
	<i>Dichanthium ischaemum</i> (L.) Roberty		h	I
	<i>Digitaria sanguinalis</i> (L.) Scop.	cosmop	t	A
	<i>Echinochloa crus-galli</i> (L.) P. Beauv.	cosmop	t	A
	<i>Eleusine indica</i> (L.) Gaertn.	cosmop	t	N
	<i>Elymus repens</i> (L.) Gould		g	I
	<i>Festuca pratensis</i> Huds.	europ-asiat	h	I
	<i>Holcus lanatus</i> L.	circ-holarct	h	I
	<i>Lolium perenne</i> L.	circ-holarct	h	I
	<i>Melica nutans</i> L.	europ	h	I
	<i>Panicum capillare</i> L.	adv	t	N
	<i>Phleum pratense</i> L.	circ-holarct	h	I
	<i>Poa palustris</i> L.	circ-holarct	h	I
	<i>Poa pratensis</i> L.	circ-holarct	h	I
	<i>Poa trivialis</i> L.	europ-asiat	h	I
	<i>Setaria pumila</i> (Poir.) Roem. et Schult.		t	A
	<i>Sorghum halepense</i> (L.) Pers.	cosmop	g	N
<i>Trisetum flavescens</i> (L.) P. Beauv.	europ-asiat	h	I	
Polygalaceae	<i>Polygala vulgaris</i> L.	europ-asiat	h	I
Polygonaceae	<i>Fallopia convolvulus</i> (L.) Á. Löve	circ-holarct	t, li	A
	<i>Polygonum aviculare</i> L.	cosmop	t	I
	<i>Polygonum persicaria</i> L.	cosmop	t	I
	<i>Reynoutria japonica</i> Houtt.		g	N
	<i>Rumex acetosa</i> L.	circ-holarct	h	I
	<i>Rumex acetosella</i> L.	cosmop	h	I
	<i>Rumex sanguineus</i> L.	europ	h	I
Primulaceae	<i>Anagallis arvensis</i> L.	medit	t	A
	<i>Anagallis coerulea</i> Schreb.		t	I
	<i>Cyclamen purpurascens</i> Mill.	illyr-balc	g	I
Primulaceae	<i>Lysimachia nummularia</i> L.	europ	h	I
	<i>Lysimachia vulgaris</i> L.	europ-asiat	h	I
	<i>Primula veris</i> L.	C-europ	h	I
	<i>Primula vulgaris</i> Huds.	europ	h	I
Ranunculaceae	<i>Aconitum lycoctonum</i> L. ssp. <i>vulparia</i> (Rchb.) Nyman	europ-asiat	h	I
	<i>Actaea spicata</i> L.	europ-asiat	h	I
	<i>Anemone nemorosa</i> L.	circ-holarct	g	I
	<i>Anemone ranunculoides</i> L.	europ	g	I
	<i>Caltha palustris</i> L.	circ-holarct	h	I
	<i>Clematis vitalba</i> L.	europ	p, li	I
	<i>Consolida regalis</i> Gray	medit	t	A
	<i>Helleborus atrorubens</i> Waldst. et Kit.		g	
	<i>Isopyrum thalictroides</i> L.	europ-asiat	g	I
	<i>Ranunculus acris</i> L.	cosmop	h	I
	<i>Ranunculus ficaria</i> L.	europ-asiat	g	I
	<i>Ranunculus repens</i> L.	europ-asiat	h	I
	<i>Eranthis hyemalis</i> (L.) Salisb.	S-europ	g	N
<i>Hepatica nobilis</i> Schreb.	cosmop	h	I	

Family	Taxon	Chorological type	Life form	Origin
Rosaceae	<i>Agrimonia eupatoria</i> L.	cosmop	h	I
	<i>Crataegus laevigata</i> (Poir.) DC.		p	I
	<i>Crataegus monogyna</i> Jacq.	europ-asiat	p	A
	<i>Filipendula ulmaria</i> (L.) Maxim.	europ-asiat	h	I
	<i>Filipendula vulgaris</i> Moench	C-europ	h	I
	<i>Fragaria vesca</i> L.	europ-asiat	h	I
	<i>Geum urbanum</i> L.	circ-holarct	h	I
	<i>Potentilla micrantha</i> DC.	medit	h	I
	<i>Potentilla recta</i> L.	europ-asiat	h	A
	<i>Potentilla reptans</i> L.	europ-asiat	h	I
	<i>Prunus avium</i> (L.) L.	C-europ	p	I
	<i>Prunus padus</i> L.	europ-asiat	p	I
	<i>Prunus spinosa</i> L.	europ	p	I
	<i>Pyrus pyraeaster</i> (L.) Burgsd.		p	I
	<i>Rosa arvensis</i> Huds.	C-europ	p, li	I
	<i>Rosa canina</i> L.	europ-asiat	p	I
	<i>Rubus caesius</i> L.	europ-asiat	c	I
	<i>Rubus hirtus</i> Waldst. et Kit.		c	I
	<i>Rubus idaeus</i> L.	circ-holarct	c	I
	<i>Rubus plicatus</i> Weihe et Nees		c	I
<i>Sanguisorba minor</i> Scop.	europ-asiat	h	I	
<i>Sorbus torminalis</i> (L.) Crantz	europ-asiat	p	I	
Rubiaceae	<i>Cruciata glabra</i> (L.) Ehrend.	europ-asiat	g	I
	<i>Cruciata laevipes</i> Opiz	europ-asiat	g	I
	<i>Galium aparine</i> L.	europ-asiat	t, li	I
	<i>Galium mollugo</i> L.	medit	h, li	I
	<i>Galium odoratum</i> (L.) Scop.	europ	g	I
	<i>Galium verum</i> L.	europ	h	I
<i>Sherardia arvensis</i> L.	medit	t	A	
Salicaceae	<i>Salix alba</i> L.	europ-asiat	p	I
Santalaceae	<i>Thesium linophyllum</i> L.	SE-europ	g	I
Saxifragaceae	<i>Chrysosplenium alternifolium</i> L.	circ-holarct	h	I
Scrophulariaceae	<i>Euphrasia rostkoviana</i> Hayne	circ-holarct	t	I
	<i>Gratiola officinalis</i> L.	circ-holarct	g	I
	<i>Lathraea squamaria</i> L.	europ-asiat	g	I
	<i>Linaria vulgaris</i> Mill.	europ-asiat	g	I
	<i>Melampyrum arvense</i> L.	europ-asiat	t	I
	<i>Melampyrum pratense</i> L.	europ-asiat	t	I
	<i>Rhinanthus minor</i> L.	circ-holarct	t	I
	<i>Verbascum nigrum</i> L.	europ-asiat	h	I
	<i>Verbascum thapsus</i> L.	europ	h	I
	<i>Veronica chamaedrys</i> L.	europ-asiat	c	I
	<i>Veronica hederifolia</i> L.	europ-asiat	t	I
	<i>Veronica officinalis</i> L.	europ-asiat	c	I
	<i>Veronica persica</i> Poir.	adv	t	N
<i>Veronica teucrium</i> L.	C-europ	h	I	
Simaroubaceae	<i>Ailanthus altissima</i> (Mill.) Swingle	adv	p	N
Solanaceae	<i>Physalis alkekengi</i> L.	europ-asiat	g	I
	<i>Solanum dulcamara</i> L.	europ-asiat	c, li	I

Family	Taxon	Chorological type	Life form	Origin
Sparganiaceae	<i>Sparganium erectum</i> L. ssp. <i>neglectum</i> (Beeby) Schinz et Thell.	europ-asiat	g	I
Staphyleaceae	<i>Staphylea pinnata</i> L.	europ-asiat	p	I
Thymelaeaceae	<i>Daphne mezereum</i> L.	europ-asiat	p	I
Tiliaceae	<i>Tilia platyphyllos</i> Scop.	europ	p	I
Typhaceae	<i>Typha</i> sp.			
Ulmaceae	<i>Ulmus glabra</i> Huds.	europ	p	I
Urticaceae	<i>Parietaria officinalis</i> L.	europ	h	A
	<i>Urtica dioica</i> L.	cosmop	h	I
Valerianaceae	<i>Valeriana dioica</i> L.	atlant	g	I
	<i>Valeriana officinalis</i> L.	europ	h	I
	<i>Valerianella dentata</i> (L.) Pollich	atlant	t	I
Verbenaceae	<i>Verbena officinalis</i> L.	europ-asiat	h, t	A
Violaceae	<i>Viola arvensis</i> Murray	europ-asiat	t	A
	<i>Viola canina</i> L.	europ-asiat	h	I
	<i>Viola hirta</i> L.	europ	h	I
	<i>Viola reichenbachiana</i> Jord. ex Boreau	europ-asiat	h	I
	<i>Viola alba</i> Besser	S-europ	h	I
	<i>Viola odorata</i> L.	europ	h	A
Woodsiaceae	<i>Athyrium filix-femina</i> (L.) Roth	cosmop	h	I