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QUANTITATIVE DATA REGARDING INVASIVE PLANT SPECIES FROM HABITATS OF EUROPEAN INTEREST IN THE PESCEANA RIVER BASIN, VÂLCEA COUNTY

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Abstract
Invasive allochtone species cause the degradation of the natural habitats they invade through the negative impact they have on native plant communities, which they tend to alter, even replace, through their increased competitiveness and their high potential for reproduction and spread.
The main objective of the study was to identify and evaluate the spread potential of allochtone invasive species observed in some habitats of European interest in the Pesceana river basin (Vâlcea county), starting from the quantitative evaluation of their populations within the plant associations specific to different types of habitats. The assessment of invasive species was carried out by determining the number of individuals and assessing the percentage abundance-dominance of these species in relation to the total abundance-dominance of the species in the plant associations specific to the different types of analyzed habitats.
Observations were carried out in the following types of habitats affected by different allochtone invasive plants: habitat 91M0 Pannonian-Balkanic turkey oak-sessile oak forests; habitat 9130 Asperulo-Fagetum beech forests; habitat 91Y0 Dacian oak & hornbeam forests; habitat 9170 Galio-Carpinetum oak-hornbeam forests; priority habitat 91E0 Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae); habitat 6430 Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels and habitat 3150 Natural eutrophic lakes with Magnopotamion or Hydrocharition – type vegetation. The primary factor that significantly contributed to the introduction and rapid spread of these plant species in the analyzed habitats was zoo-anthropogenic.*
Among the invasive plant species that affect the floristic composition of the plant associations in the assessed habitats, the most frequent were: Erigeron canadensis, Ambrosia artemisiifolia, Robinia pseudoacacia, Erigeron annuus subsp. strigosus, Xanthium orientale subsp. italicum, Elodea nuttallii and Ailanthus altissima, all being classified as neophytes.
Interpretation of the field date showed that the most affected types of habitats were 91E0 and 6430 and the most affected plant associations, depending on the share of invasive plant species, were Aegopodio podagrariae-Alnetum glutinosae Karpati et Jurko 1964, respectively Scirpetum sylvatici Ralski 1931 em. Schweich. In the case of the association Aegopodio podagrariae-Alnetum glutinosae Karpati et Jurko 1964, the percentage values of the abundance-dominance of the invasive species are very high compared to the value of the total abundance-dominance of the component species, which denotes a high degree of damage and the high potential of dissemination to the associations adjoining plants and to other similar types of habitats.*

Keywords: allochtone invasive plants, habitats, Pesceana, Vâlcea.

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1. INTRODUCTION

Biological invasions pose an increasing risk to nature, social security and the economy, being ranked amongst the top five threats to biodiversity (Anastasiu et al., 2024). Human activities facilitated the introduction and establishment of alien species around the world (Roy et al., 2023). The number of invasive plant species and their impacts are increasing rapidly and are likely to continue rising (Seebens et al., 2017; Seebens et al., 2020; *Pyšek* et al., 2020; Roy et al., 2023). Therefore, addressing the issue of biological invasions is of utmost importance (European Commission 2020, CBD 2022).

According to the Biodiversity Strategy for 2030, managing invasive alien plants is a priority for the European Union (https://eur-lex.europa.eu/RO/legal-content/summary/eu-biodiversity-strategy-for-2030.html). As a result, Regulation (EU) No. 1143/2014 focuses on invasive alien species and aims to prevent and limit their negative effects on the environment (Sîrbu et al., 2022).

The invasive plant species represent an actual problem, representative for the whole world. They have the ability to spread rapidly and occupy large areas, causing considerable damage to natural habitats, especially riverbanks, forest edges and other open areas (Farooq et al., 2017). It is estimated that there are already more than 12.000 alien species in Europe, of which around 10-15% are invasive (European Commission, 2016).

The phenomenon of invasion is accentuated, mainly in those habitats where competition is weak or weakened by human intervention (Dihoru, 2004). Once it enters a habitat, an invasive species favor the invasion of other species by reducing the abundence of native plant species.

Whether it is about ecological, economic and social impact, it considerably alters the development of habitats which is directly related to the comfort and health of the population (Hapca, 2014).

Due to its geographical position in the center of Europe (Rey et al., 2007), to the diversity of ecosystems and habitats and intense trade with other states, România is prone to biological invasions (Anastasiu and Negrean, 2007; Preda and Skolka, 2011; Sîrbu et al., 2011; Anastasiu et al., 2017; Stănescu et al., 2020; Urziceanu et al., 2020).

The basin of the Pesceana river located in the central-southern part of Romania, in the Subcarpathian depression of Oltenia, fully integrated in Vâlcea county, is characterized by the existence of a high and permanent anthropogenic impact mainly due to agricultural activities which facilitates the introduction and spread of invasive species.

2. MATERIALS AND METHODS

This article presents a preliminary study about the invasive plant species from the Pesceana river basin and the quantitative assessment, study that was carried out between 2022-2023, in the optimal months of their development, respectively June-September.

The quantitative evaluation of the invasive species in relation to the native species in the floristic composition of the studied plant associations, it was done by noting the abundance-dominance of the species, in some surveys, carried out in compliance with the methodology of the Central European School (Braun-Blanquet). The surveys were carried out in sample surfaces with a size of 100 m^2, in the case of herbaceous formations and 400 m^2 in the case of forests. The abundance-dominance index was assessed according to the AD scale developed by Braun-Blanquet (1964).

The nomenclature of the taxa in plant associations evaluated was in accordance with Euro+Med Plant Base (https://www.emplantbase.org/home.html), and the vegetation according to FloraVeg.EU (*Chytrý* et al., 2024).

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The correlation of plant associations with habitat type was carried out in accordance with the "Interpretation manual of the Natura 2000 habitats from Romania" (Gafta and Mountford (eds) et al., 2008). Regarding the evaluation of the size of the populations, a five-step scale was taken into account, similarly to the evaluations carried out within the POIM120008 project (https://invazive.ccmesi.ro), respectively: 1 (between 1-10 individuals); 2 (between 11-50 individuals); 3 (between 51-100 individuals); 4 (between 101-500 individuals); 5 (more than 500 individuals).

In order to score the abundance-dominance (AD) of taxa at the level of phytocenoses, the Braun-Blanquet (1964) scale was used, as follows: r = one or several individuals; + = few individuals, with low coverage; 1 = quite abundant individuals, but with the degree of coverage below 1/20 of the sample area; 2 = very abundant individuals or covering at least 1/20 of the sample area; 3 = coverage ranges from 1/4 to 1/2 of the sample area, regardless of the number of individuals; 4 = coverage ranges from 1/2 to 3/4 of the sample area, regardless of the number of individuals; 5 = coverage of more than 3/4 of the sample area, regardless of the number of individuals (Cristea et al., 2004).

The percentage value of the abundance-dominance (AD) for the invasive species related to the value of the percentage abundance-dominance of the native species from the plant associations of each analyzed habitat was calculated according to each step of the abundance-dominance, as follows: 5=87,5%; 4=62,5%; 3=37,5%; 2=17,5%; 1=5,5%; + = 0,5% and r=0,05% (Table 2). Subsequently, the degree of coverage (%) and the class were noted: <1 (r; +); 1-10% (1); 10-25% (2); 25-50% (3); 50-75% (4) and 75-100% (5) (Cristea et al., 2004).

These correlated data allowed the identification of the most affected types of habitats, through the large number of individuals and the high abundance-dominance of invasive plant species.

3. RESULTS AND DISCUSSIONS

Currently, in Romania (including Oltenia), forests cover smaller and smaller areas, accounting for about 30 % of the country's surface (Forest Europe, 2020). The reduction of the forest surfaces was due to deforestation and human activity to these habitats, as well as by climate changes defined by increasingly accentuated manifestations in recent years, such as increased temperatures, reduced precipitation, almost absent for quite a long period, especially in Oltenia. These opportunist species take advantage of every climatic change in order to expand their survival rate leading to the loss of the native species (Hellmann et al., 2008).

Although, at the level of the researched area, the distribution of most invasive plant species is limited to the level of anthropogenic, disturbed habitats, some also invade natural or semi-natural habitats.

The observations made within the plant association *Quercetum frainetto-cerris* (Georgescu 1945) Rudski 1949 (habitat 91M0), result in a low degree of invasiveness of invasive plant species (Table 1; Figure 2). Thus, on the edge of the forests of turkey oak and Hungarian oak, 4 inavasive species are mentioned, respectively *Prunus cerasifera*, *Erigeron annuus* subsp. *strigosus* (Figure 1), *Robinia pseudoacacia* and *Xanthium orientale* subsp. *italicum*. Referring to the size of the populations, they are sparsely distributed, the number of individuals of each species being between 1-10 individuals (Figure 2). Regarding the abundance-dominance of the 4 invasive species within the plant association, they show a low degree of coverage, of approximately 2% (Table1).

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Figure 1. Erigeron annuus* subsp. *strigosus* – the edge of habitat 91M0

Regarding the association *Carpino-Fagetum* Paucă 1941 (habitat 9130), the degree of invasiveness of these species is also low (Table 1; Figure 2). Three invasive species were identified, respectively *Erigeron annuus* subsp. *strigosus*, *Robinia pseudoacacia* and *Ambrosia artemisiifolia*. Referring to the size of the populations, *Erigeron annuus* subsp. *strigosus* stands out with populations between 11-50 individuals, while *Robinia pseudoacacia* and *Ambrosia artemisiifolia* show a lower distribution, of 1-10 individuals (Figure 2). From the point of view of the abundance-dominance of species within the plant association, they have a coverage of approximately 2% (Table 1).
At the level of pure sessile forests belonging to the plant association *Potentillo micranthae-Quercetum dalechampii* A.O. Horvat 1981 (habitat 91Y0), from the category of invasive plants, the species *Acer negundo*, *Erigeron annuus* subsp. *strigosus* and *Xanthium orientale* subsp. *italicum* were observed, with a low degree of coverage, of approximately 2% (Table 1). Following the assessment of populations size, *Erigeron annuus* subsp. *strigosus* stands out with a number of individuals between 11-50, and the other two species are poorly represented, with less than 10 individuals (Figure 2).

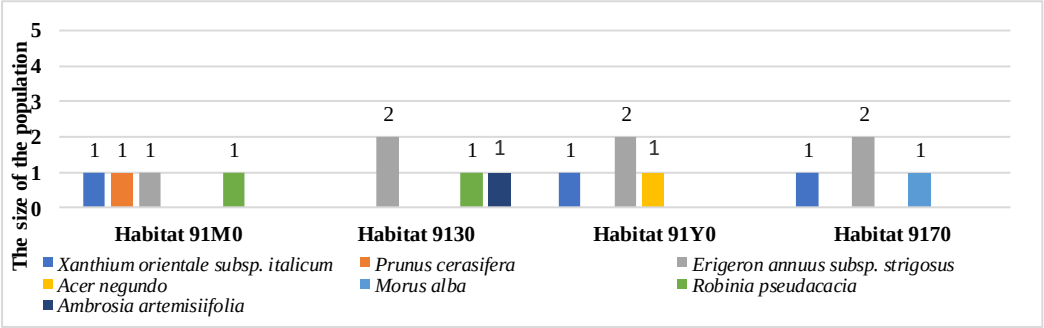

Figure 2. Invasive allochtone plants within the inventoried forest habitats

With a small number of individuals (less than 50 individuals), in less than ½ of the inventoried sample areas (1-10%), the following invasive plant species were identified in the plant association

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Carici pilosae-Carpinetum Chifu 1995 (habitat 9170): *Erigeron annuus* subsp. *strigosus*, *Xanthium orientale* subsp. *italicum* and *Morus alba*, with a coverage of 2% (Table 1; Figure 2).
Invasive plant species were identified in a small number of surveys, only in the edge areas of the habitat mentioned above, at the interface with scrub and meadows. The degree of invasiveness in these forest habitats is low.
The analysis carried out, based on the surveys from the plant association *Scirpetum sylvatici* Ralski 1931 em. Schwich (habitat 6430), points out an increased degree of invasiveness of the allochtone species (Table 1; Figure 3). In this sense, *Xanthim orientale* subsp. *italicum*, *Erigeron annuus* subsp. *strigosus* and *Bidens frondosa* are present in all surveys carried out, with a coverage between 1-10% (Table 1). However, these species are represented by a high number of individuals, between 51-100 (Figure 3). This can be explained, in particular, by the fact that phytocoenoses are trampled by animals, in search of grasses, thus facilitating the entry of these species.

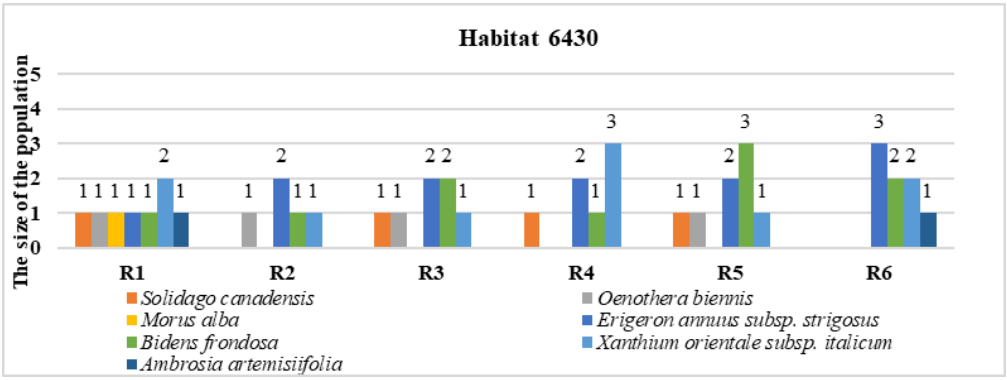

Figure 3. Invasive allochtone plants in habitat 6430

The observations made at the level of the plant association *Aegopodio podagrariae-Alnetum glutinosae* Karpati et Jurko 1965 (habitat 91E0*), show a high degree of invasiveness of allochtone species.
In European countries, riparian habitats are subjects to several kinds of human impact that are highly detrimental for biodiversity and, for this reason, they are included in the Directive 92/43/EEC ("Habitats Directive") (Belcore et al., 2021). Moreover, „Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*)" (Natura 2000 code: 91E0*) are also considered to be priority habitats for biodiversity conservation (Biondi et al., 2009).
Following the analysis carried out on the basis of the surveys, they are highlighted as the most aggressive species from an invasive point of view, represented by populations with numerous individuals (between 51-100 individuals), with a high spreading power and with increased viability (Figure 10; Table 1): *Ambrosia artemisiifolia* (Figure 4); *Erigeron annuus* subsp. *strigosus* (Figure 5); *Bidens frondosa* (Figure 6); *Erigeron canadensis*; *Xanthium orientale* subsp. *italicum*; *A. powellii* (Figure 7).
The establishment and spread of these species in the priority habitat is facilitated either by grazing, or by overexploitation or dumping of household waste.

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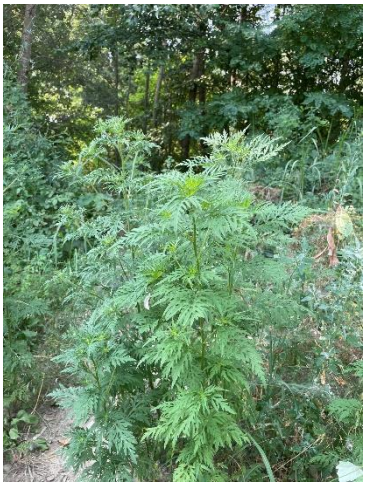

Figure 4. Ambrosia artemisiifolia (habitat 91E0*)

Figure 5. Erigeron annuus subsp. strigosus (habitat 91E0*)

Figure 6. Bidens frondosa (habitat 91E0*)

Figure 7. Amaranthus powellii (habitat 91E0*)

Figure 8. Phytolacca americana (habitat 91E0*)

Figure 9. Reynoutria japonica (habitat 91E0*)

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The other invasive plant species reported in the habitat 91E0*, namely, *Gleditsia triacanthos*; *Morus alba*; *Phytolacca americana* (Figure 8); *Galinsoga parviflora*; *Reynoutria japonica* (Figure 9); *Helianthus tuberosus*; *Veronica persica*; *Bidens tripartita*; *Oenothera biennis*; *Juncus tenuis*; *Solidago gigantea; Prunus cerasifera* achieves a reduced total coverage of approximately 7% (Table 1).

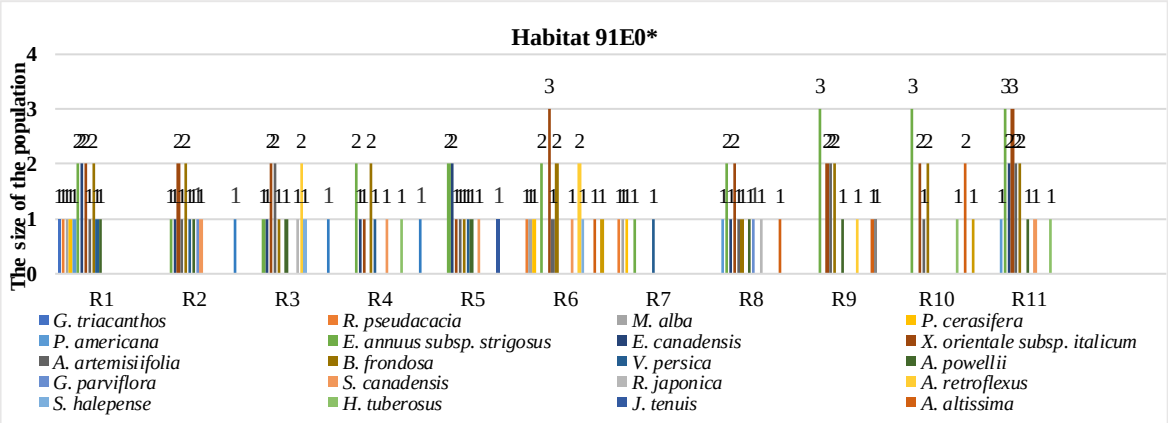

Figure 10. Invasive allochtone plants in habitat 91E0*

It is obvious that the habitats 91E0* and 6430 are the most affected by the invasion of these plant species. The riparian habitats are usually very vulnerable at the invasions because of their linear alignement.

The percentage calculation of the abundance-dominance of invasive species related to the total abundance-dominance of the species in the plant associations specific to the different types of analyzed habitats is presented according to the main objective of this study (Table 2). However, table 2 provide a clear picture between the percentage of the average abundance-dominance of native species and the average abundance-dominance of invasive species.

In the dry summers, the Pesceana river and its main tributaries dry up, and, in time, this fact facilitated the introduction and establishment on the low banks of pioneer species, some of them invasive.

Annual species are those that significantly contribute to the modification of the floristic composition in riparian habitats (e.g. *Xanthium orientale* subsp *italicum*; *Amaranthus retroflexus*; *Veronica persica*; *Bidens frondosa*), while in forest habitats, it is the perennial species that affect their structure and functions (e.g. *Robinia pseudoacacia*; *Acer negundo*).

Among the invasive plant species observed and evaluated in the studied area, there are also two species on the European Union list, very aggressive species in European Union habitats, respectively *Ailanthus altissima* in priority habitat 91E0* (Figure 11) and *Elodea nuttalli* in habitat 3150 (Figure 12).

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Figure 11. Ailanthus altissima (habitat 91E0*)

Figure 12. Elodea nuttalli (habitat 3150) – joining point of the Pesceana river with the Olt river

Table 1. Percentage calculation of the abundance-dominance of invasive species carried out in the surveys of the plant associations of each analyzed habitat

Plant community (Natura 2000 Habitat type)	Surveys	Invasive taxa	The central value of the class (%)	Range of coverage (%)	Class
Quercetum frainetto-cerris (Georgescu 1945) Rudski 1949 (forest edges 91M0)	-	*Prunus cerasifera* Ehrh.	0.05%	<0.1%	r
		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	0.5%	0.1-1%	+
		Robinia pseudoacacia L.	0.05%	<0.1%	r
		Xanthium orientale L. subsp. *italicum* (Moretti) Greuter	0.5%	0.1-1%	+
Carpino-Fagetum Paucă 1941 (forest edges 9130)	-	*Erigeron annuus* (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	0.5%	0.1-1%	+
		Robinia pseudoacacia L.	0.5%	0.1-1%	+
		Ambrosia artemisiifolia L.	0.5%	0.1-1%	+
Potentillo micranthae-Quercetum dalechampii A.O. Horvat 1981 (forest edges 91Y0)	-	*Erigeron annuus* (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	0.5%	0.1-1%	+
		Acer negundo L.	0.5%	0.1-1%	+
		Xanthium orientale L. subsp. *italicum* (Moretti) Greuter	0.5%	0.1-1%	+
Carici pilosae-Carpinetum Chifu 1995 (habitat 9170)	-	*Erigeron annuus* subsp. *strigosus*	0.5%	0.1-1%	+
		Xanthium orientale L. subsp. *italicum* (Moretti) Greuter	0.5%	0.1-1%	+
		Morus alba L.	0.05%	<0.1%	r
Scirpetum sylvatici Ralski 1931 em. Schwich (habitat 6430)	R1	*Xanthium orientale* L. subsp. *italicum* (Moretti) Greuter	5.5%	1-10%	1
		Solidago canadensis L.	0.5%	0.1-1%	+
		Oenothera biennis L.	0.5%	0.1-1%	+
		Morus alba L.	0.5%	0.1-1%	+

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		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	5.5%	1-10%	1
		Bidens frondosa L.	5.5%	1-10%	1
		Ambrosia artemisiifolia L.	0.5%	0.1-1%	+
	R2	*Xanthium orientale* L. subsp. *italicum* (Moretti) Greuter	5.5%	1-10%	1
		Oenothera biennis L.	0.5%	0.1-1%	+
		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	5.5%	1-10%	1
		Bidens frondosa L.	5.5%	1-10%	1
	R3	*Xanthium orientale* L. subsp. *italicum* (Moretti) Greuter	5.5%	1-10%	1
		Solidago canadensis L.	0.5%	0,1-1%	+
		Oenothera biennis L.	0.5%	0.1-1%	+
		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	17.5%	10-25%	2
		Bidens frondosa L.	5.5%	1-10%	1
	R4	*Xanthium orientale* L. subsp. *italicum* (Moretti) Greuter	17.5%	10-25%	2
		Solidago canadensis L.	0.5%	0.1-1%	+
		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	5.5%	1-10%	1
		Bidens frondosa L.	5.5%	1-10%	1
	R5	*Xanthium orientale* L. subsp. *italicum* (Moretti) Greuter	5.5%	1-10%	1
		Solidago canadensis L.	0.5%	0.1-1%	+
		Oenothera biennis L.	0.5%	0.1-1%	+
		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	5.5%	1-10%	1
		Bidens frondosa L.	17.5%	10-25%	2
	R6	*Xanthium orientale* L. subsp. *italicum* (Moretti) Greuter	5.5%	1-10%	1
		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	17.5%	10-25%	2
		Bidens frondosa L.	5.5%	1-10%	1
		Ambrosia artemisiifolia L.	0.5%	0.1-1%	+
Aegopodio podagrariae-Alnetum glutinosae Karpati et Jurko 1965 (habitat 91E0*)	R1	*Gleditsia triacanthos* L.	0.05%	<0.1%	r
		Morus alba L.	0.05%	<0.1%	r
		Robinia pseudoacacia L.	0.05%	<0.1%	r
		Prunus cerasifera Ehrh.	0.05%	<0.1%	r
		Phytolacca americana L.	0.05%	<0.1%	r
		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	5.5%	1-10%	1
		Erigeron canadensis L.	5.5%	1-10%	1
		Ambrosia artemisiifolia L.	0.05%	<0.1%	r
		Xanthium orientale L. subsp.	0.5%	0.1-1%	+

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		italicum (Moretti) Greuter			
		Bidens frondosa L.	0.5%	0.1-1%	+
		Veronica persica Poir.	0.05%	<0.1%	r
		Amaranthus powellii Watson	0.05%	<0.1%	r
	R2	*Erigeron canadensis* L.	0.5%	0.1-1%	+
		Veronica persica Poir.	0.5%	0.1-1%	+
		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	0.5%	0.1-1%	+
		Xanthium orientale L. subsp. *italicum* (Moretti) Greuter	5.5%	1-10%	1
		Solidago canadensis L.	0.5%	0.1-1%	+
		Ambrosia artemisiifolia L.	0.5%	0.1-1%	+
		Galinsoga parviflora Cav.	0.5%	0.1-1%	+
		Amaranthus powellii Watson	0.5%	0.1-1%	+
	R3	*Reynoutria japonica* Houtt.	0.05%	<0.1%	r
		Erigeron canadensis L.	0.5%	0.1-1%	+
		Xanthium orientale L. subsp. *italicum* (Moretti) Greuter	5.5%	1-10%	1
		Ambrosia artemisiifolia L.	5.5%	1-10%	1
		Amaranthus retroflexus L.	5.5%	1-10%	1
		Sorghum halepense (L.) Pers.	0.05%	<0.1%	r
		Bidens frondosa L.	0.5%	0.1-1%	+
	R4	*Erigeron canadensis* L.	0.5%	0.1-1%	+
		Veronica persica Poir.	0.05%	<0.1%	r
		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	5.5%	1-10%	1
		Xanthium orientale L. subsp. *italicum* (Moretti) Greuter	0.5%	0.1-1%	+
		Solidago canadensis L.	0.5%	0.1-1%	+
		Helianthus tuberosus L.	0.05%	<0.1%	r
	R5	*Erigeron canadensis* L.	5.5%	1-10%	1
		Veronica persica Poir.	0.05%	<0,1%	r
		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	5.5%	1-10%	1
		Xanthium orientale L. subsp. *italicum* (Moretti) Greuter	0.5%	0.1-1%	+
		Juncus tenuis Willd	0.05%	<0.1%	r
		Ambrosia artemisiifolia L.	0.5%	0.1-1%	+
		Amaranthus powellii Watson	0.5%	0.1-1%	+
	R6	*Erigeron annuus* (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	0.5%	0.1-1%	+
		Robinia pseudoacacia L.	0.05%	<0.1%	r
		Morus alba L.	0.05%	<0.1%	r
		Prunus cerasifera Ehrh.	0.05%	<0.1%	r
		Xanthium orientale L. subsp. *italicum* (Moretti) Greuter	5.5%	1-10%	1
		Bidens frondosa L.	0.5%	0.1-1%	+

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		Sorghum halepense (L.) Pers.	0.05%	<0.1%	r
		Solidago canadensis L.	0.5%	0.1-1%	+
	R7	*Morus alba* L.	0.05%	<0.1%	r
		Robinia pseudoacacia L.	0.05%	<0.1%	r
		Prunus cerasifera Ehrh.	0.05%	<0.1%	r
		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	0.5%	0.1-1%	+
		Bidens frondosa L.	5.5%	1-10%	1
	R8	*Galinsoga parviflora* Cav.	0.5%	0.1-1%	+
		Reynoutria japonica Houtt.	0.5%	0.1-1%	+
		Phytolacca americana L.	0.5%	0.1-1%	+
		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	5.5%	1-10%	1
		Bidens frondosa L.	5.5%	1-10%	1
		Ambrosia artemisiifolia L.	5.5%	1-10%	1
		Erigeron canadensis L.	5.5%	1-10%	1
		Xanthium orientale L. subsp. *italicum* (Moretti) Greuter	5.5%	1-10%	1
	R9	*Erigeron annuus* (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	5.5%	1-10%	1
		Xanthium orientale L. subsp. *italicum* (Moretti) Greuter	5.5%	1-10%	1
		Bidens frondosa L.	5.5%	1-10%	1
		Solidago gigantea L.	0.5%	0.1-1%	+
		Amaranthus retroflexus L.	0.5%	0.1-1%	+
		Ambrosia artemisiifolia L.	5.5%	1-10%	1
	R10	*Bidens frondosa* L.	5.5%	1-10%	1
		Ailanthus altissima (Miller) Swingle	0.5%	0.1-1%	+
		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	5.5%	1-10%	1
		Helianthus tuberosus L.	0.5%	0.1-1%	+
		Bidens tripartita L.	0.5%	0.1-1%	+
		Ambrosia artemisiifolia L.	5.5%	1-10%	1
		Xanthium orientale L. subsp. *italicum* (Moretti) Greuter	5.5%	1-10%	1
	R11	*Ambrosia artemisiifolia* L.	5.5%	1-10%	1
		Bidens frondosa L.	5.5%	1-10%	1
		Xanthium orientale L. subsp. *italicum* (Moretti) Greuter	5.5%	1-10%	1
		Solidago canadensis L.	0.5%	0.1-1%	+
		Erigeron annuus (L.) subsp. *strigosus* (Muhl. ex Willd.) Wagenitz	5.5%	1-10%	1
		Helianthus tuberosus L.	0.5%	0.1-1%	+
		Erigeron canadensis L.	5.5%	1-10%	1
		Phytolacca americana L.	0.5%	0.1-1%	+

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Table 2. Percentage calculation of the abundance-dominance of invasive species related to the percentage value of the abundance-dominance of native species carried out in the surveys of the plant associations of analyzed habitats

Species	Native Species	Invasive Species	Habitat 91M0					Habitat 9130					Habitat 91Y0					Habitat 9170				
			R1	R2	R3	R4	R5	R1	R2	R3	R4	R5	R1	R2	R3	R4	R5	R1	R2	R3	R4	R5
Quercus frainetto	+		62.5	62.5	62.5	62.5	62.5	-	-	-	-	-	-	-	-	-	-	0.5	0.5	-	0.5	-
Quercus cerris	+		5.5	5.5	5.5	5.5	5.5															
Potentilla micrantha	+		-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	5.5	0.5	0.5	5.5	0.5	0.5	0.5	0.5	0.5	-
Aremonia agrimonoides	+		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	-
Campanula persicifolia	+		0.5	0.5	0.5	0.5	-	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	0.5	-	0.5
Fragaria viridis	+		0.5	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dioscorea communis	+		0.5	0.5	-	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-	-	-	-
Silene viridiflora	+		0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-
Silene vulgaris	+		0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ruscus aculeatus	+		0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-
Tilia tomentosa	+		-	-	0.5	-	0.5	0.5	0.5	0.5	-	-	0.5	0.5	-	-	0.5	-	0.5	0.5	-	0.5
Silene nemoralis	+		0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sorbus torminalis	+		-	0.5	-	0.5	-	0.5	-	0.5	-	-	0.5	0.5	-	0.5	-	-	0.5	-	0.5	-
Lychnis coronaria	+		0.5	0.5	-	0.5	0.5	-	-	-	-	-	0.5	0.5	0.5	-	0.5	-	-	-	-	-
Teucrium chamaedrys	+		0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Genista tinctoria subsp. *elatior*	+		0.5	0.5	-	0.5	0.5	-	0.5	0.5	-	0.5	-	0.5	0.5	0.5	0.5	-	-	-	-	-
Chamaecytisus hirsutus subsp *leucotrichus*	+		0.5	0.5	0.5	0.5	0.5	-	0.5	-	-	0.5	-	0.5	-	0.5	-	-	-	-	-	-
Euphorbia epithymoides	+		0.5	0.5	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Festuca heterophylla	+		0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	0.5	0.5	-	0.5	0.5	-	-	-	-	-
Vincetoxicum hirundinaria	+		0.5	0.5	0.5	0.5	0.5	-	-	0.5	0.5	-	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	-	-
Cornus mas	+		-	-	0.5	0.5	-	-	-	-	-	-	0.5	0.5	0.5	-	0.5	-	-	-	-	-
Pyrus pyraster	+		0.5	-	-	-	0.5	-	-	-	-	-	0.5	0.5	-	-	0.5	-	-	-	-	-
Lithospermum purpurocaeruleum	+		5.5	0.5	0.5	0.5	0.5	-	-	-	-	-	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5	-
Acer campestre	+		-	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	-	-	0.5	5.5	0.5	-	-	-	0.5	0.5	0.5
Brachypodium sylvaticum	+		0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	-	0.5	0.5	-	-	-	-	-
Asparagus tenuifolius	+		0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alliaria petiolata	+		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	-	-	-	-	-
Glechoma hirsuta	+		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lathyrus niger	+		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	-	-	-	-	-
Poa nemoralis	+		0.5	0.5	0.5	0.5	0.5	-	0.5	-	0.5	0.5	-	0.5	-	0.5	-	-	-	-	-	-
Carex divulsa	+		0.5	0.5	-	-	0.5	-	-	-	-	-	0.5	0.5	-	0.5	0.5	-	-	-	-	-
Geum urbanum	+		0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hieracium murorum	+		0.5	0.5	-	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	-	0.5	0.5
Corylus avellana	+		-	-	-	0.5	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-
Polygonatum latifolium	+		0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	-	0.5	0.5	-	-	-	-	-	-
Lathyrus venetus	+		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Scilla bifolia	+		-	0.5	0.5	-	-	0.5	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-
Lamium galeobdolon	+		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Cephalanthera longifolia	+		-	0.5	-	0.5	-	0.5	-	0.5	0.5	-	-	-	-	-	-		0.5	0.5	0.5	0.5
Ruscus hypoglossum	+		-	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anemone ranunculoides	+		0.5	0.5	-	0.5	-	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-
Dentaria bulbifera	+		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-

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Geranium robertianum	+		0.5	0.5	0.5	0.5	-	-	0.5	0.5	0.5	0.5	0.5	0.5	-	-	0.5	-	-	-	-	-
Hedera helix	+		-	0.5	-	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	-	0.5	-	-	-	-	-
Euphorbia amygdaloides	+		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-	0.5	0.5	0.5	0.5	0.5	0.5
Viola reichenbachiana	+		-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Corydalis cava subsp. *marschalliana*	+		-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luzula luzuloides	+		-	0.5	-	0.5	0.5	0.5	0.5	-	-	0.5	-	-	-	-	-	-	-	-	-	-
Festuca gigantea	+		-	-	-	0.5	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-
Epipactis purpurata	+		-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cornus sanguinea	+		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	-	-
Clematis vitalba	+		0.5	0.5	0.5	0.5	0.5	-	-	-	0.5	0.5	0.5	-	0.5	-	-	-	-	-	-	-
Prunus spinosa	+		0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veronica chamaedrys	+		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5
Crataegus monogyna	+		0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	0.5	0.5	0.5	-	0.5	-	0.5	0.5	0.5	0.5
Rosa canina	+		-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium pseudaristatum	+		-	0.5	-	-	0.5	-	-	-	-	-	0.5	-	0.5	-	-	-	-	-	-	-
Agrimonia eupatoria	+		0.5	0.5	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-	-	0.5	0.5	0.5	-
Veronica officinalis	+		0.5	0.5	0.5	0.5	0.5	-	-	-	0.5	-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5
Sedum sexangulare	+		-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ulmus glabra	+		-	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carpinus betulus	+		0.5	0.5	0.5	0.5	0.5	5.5	17.5	5.5	5.5	5.5	0.5	5.5	5.5	0.5	0.5	62.5	62.5	62.5	62.5	62.5
Cerasus avium	+		-	-	0.5	0.5	0.5	-	0.5	0.5	-	0.5	0.5	-	-	0.5	-	-	-	-	-	-
Fraxinus ornus	+		0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Clinopodium vulgare	+		0.5	0.5	-	0.5	-	0.5	0.5	0.5	0.5	0.5	-	-	-	0.5	0.5	0.5	0.5	0.5	0.5	-
Ligustrum vulgare	+		0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	-	0.5
Tanacetum corymbosum	+		-	0.5	0.5	0.5	0.5	-	-	-	-	-	-	0.5	0.5	0.5	-	-	-	-	-	-
Rubus caesius	+		0.5	0.5	-	-	0.5	-	0.5	0.5	-	0.5	0.5	0.5	0.5	-	0.5	-	-	-	-	-
Mycelis muralis	+		-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5
Lapsana communis	+		0.5	0.5	-	0.5	-	-	-	-	-	-	0.5	-	0.5	0.5	0.5	-	-	-	-	-
Galium aparine	+		0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-
Acer tataricum	+		-	-	0.5	-	0.5	-	-	-	-	-	0.5	-	-	0.5	-	-	-	-	-	-
Dactylis glomerata	+		0.5	-	0.5	0.5	-	0.5	0.5	-	0.5	0.5	-	-	-	-	-	-	0.5	0.5	0.5	0.5
Fallopia dumetorum	+		-	-	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Erigeron annuus subsp. *strigosus*		+	-	0.5	-	-	0.5	0.5	-	0.5	0.5	-	0.5	-	-	0.5	-	0.5	-	-	0.5	-
Galium schultesii	+		0.5	-	-	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	-	-	-	-	-
Melittis melissophyllum	+		0.5	-	-	0.5	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	0.5	0.5	0.5	0.5	-
Ranunculus auricomus	+		-	0.5	0.5	-	-	-	-	0.5	0.5	-	0.5	-	-	-	0.5	-	-	-	-	-
Trifolium medium	+		-	-	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Erythronium dens-canis subsp. *niveum*	+		0.5	0.5	0.5	-	-	-	-	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	-	-	-	-	-
Pulmonaria officinalis	+		0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-	0.5	-	-	-	-	-	-	0.5	0.5	0.5	0.5
Inula hirta	+		-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carex remota	+		0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cruciata pedemontana	+		-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Robinia pseudoacacia		+	-	-	0.5	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Xanthium orientale subsp. *italicum*		+	-	-	-	0.5	-	-	-	-	-	-	-	-	0.5	-	0.5	-	0.5	0.5	-	-
Prunus cerasifera		+	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fagus sylvatica subsp. *moesiaca*	+		-	-	-	-	-	62.5	37.5	62.5	62.5	62.5	0.5	-	0.5	-	-	-	-	-	-	-

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Asarum europaeum	+		-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	-	0.5	0.5	0.5	0.5
Galium odoratum	+		-	-	-	-	-	0.5	0.5	-	-	0.5	0.5	0.5	0.5	0.5	0.5	-	-	-	-	-
Carex digitata	+		-	-	-	-	-	0.5	0.5	0.5	-	0.5	-	-	-	-	-	-	0.5	0.5	0.5	0.5
Sanicula europaea	+		-	-	-	-	-	0.5	0.5	-	-	0.5	0.5	-	0.5	-	-	0.5	0.5	0.5	0.5	0.5
Neottia nidus-avis	+		-	-	-	-	-	0.5	-	-	0.5	0.5	-	-	0.5	0.5	-	-	0.5	-	0.5	0.5
Dryopteris filix-mas	+		-	-	-	-	-	-	0.5	-	-	0.5	0.5	0.5	-	0.5	-	-	-	-	-	-
Ajuga reptans	+		-	-	-	-	-	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	-	-
Melica uniflora	+		-	-	-	-	-	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Athyrium filix-femina	+		-	-	-	-	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Cardamine impatiens	+		-	-	-	-	-	0.5	-	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-
Tilia platyphyllos	+		-	-	-	-	-	0.5	-	-	0.5	0.5	-	0.5	-	0.5	-	-	-	-	-	-
Impatiens noli-tangere	+		-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Galeopsis speciosa	+		-	-	-	-	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Acer platanoides	+		-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lathyrus vernus	+		-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Scrophularia nodosa	+		-	-	-	-	-	0.5	-	0.5	0.5	0.5	-	-	-	-	-	0.5	0.5	0.5	0.5	-
Milium effusum	+		-	-	-	-	-	-	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-
Acer pseudoplatanus	+		-	-	-	-	-	-	0.5	0.5	-	-	0.5	-	-	0.5	-	-	-	-	-	-
Cruciata glabra	+		-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	-	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5
Carex pilosa	+		-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	-	0.5	17.5	5.5	17.5	17.5	17.5
Carex sylvatica	+		-	-	-	-	-	0.5	0.5	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-
Fragaria vesca	+		-	-	-	-	-	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	-	0.5	-	-	-	-	-
Anemone nemorosa	+		-	-	-	-	-	0.5	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-
Vinca minor	+		-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-
Euonymus europaeus	+		-	-	-	-	-	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-
Quercus dalechampii	+		-	-	-	-	-	0.5	0.5	0.5	-	0.5	62.5	62.5	62.5	62.5	62.5	-	-	-	-	-
Prunella vulgaris	+		-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	0.5	0.5	0.5	-	-
Veronica serpyllifolia	+		-	-	-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	-	0.5	-	-	-	-	-
Fraxinus excelsior	+		-	-	-	-	-	0.5	0.5	0.5	-	0.5	0.5	0.5	-	-	0.5	-	-	-	-	-
Arctium lappa	+		-	-	-	-	-	-	-	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-
Tussilago farfara	+		-	-	-	-	-	0.5	-	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-
Sambucus nigra	+		-	-	-	-	-	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Lathyrus hallerstenii	+		-	-	-	-	-	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Melampyrum bihariense	+		-	-	-	-	-	-	-	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-
Lysimachia nummularia	+		-	-	-	-	-	0.5	-	-	-	0.5	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5
Silene latifolia subsp. *alba*	+		-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Epilobium hirsutum	+		-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-
Stellaria holostea	+		-	-	-	-	-	0.5	0.5	-	0.5	0.5	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5
Carex vulpina	+		-	-	-	-	-	0.5	0.5	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-
Circaea lutetiana	+		-	-	-	-	-	-	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-
Asperula taurina	+		-	-	-	-	-	-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-
Carex pendula	+		-	-	-	-	-	0.5	5.5	0.5	5.5	0.5	-	-	-	-	-	-	-	-	-	-
Cephalanthera damasonium	+		-	-	-	-	-	-	-	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-
Ambrosia artemisiifolia		+	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-
Sorbus domestica	+		-	-	-	-	-	-	-	-	-	-	-	0.5	0.5	0.5	-	-	-	-	-	-
Epipactis helleborine	+		-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.5	-	-	-	-	-
Physalis alkekengi	+		-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.5	-	-	-	-	-
Aristolochia clematitis	+		-	-	-	-	-	-	-	-	-	-	0.5	0.5	-	0.5	0.5	-	-	-	-	-
Polygonatum odoratum	+		-	-	-	-	-	-	-	-	-	-	-	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	-
Luzula forsteri	+		-	-	-	-	-	-	-	-	-	-	-	0.5	-	0.5	0.5	-	-	-	-	-

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Malus sylvestris	+		-	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-
Dactylis polygama	+		-	-	-	-	-	-	-	-	-	-	0.5	0.5	0.5	-	0.5	-	-	-	-	-
Loranthus europaeus	+		-	-	-	-	-	-	-	-	-	-	0.5	-	0.5	0.5	0.5	-	-	-	-	-
Lysimachia vulgaris	+		-	-	-	-	-	-	-	-	-	-	-	0.5	-	0.5	-	-	-	-	-	-
Dorycnium herbaceum	+		-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.5	0.5	-	-	-	-	-
Populus tremula	+		-	-	-	-	-	-	-	-	-	-	0.5	0.5	-	-	-	-	-	-	-	-
Quercus robur	+		-	-	-	-	-	-	-	-	-	-	-	-	5.5	0.5	5.5	-	-	-	-	-
Tragopogon orientalis	+		-	-	-	-	-	-	-	-	-	-	0.5	-	-	0.5	0.5	-	-	-	-	-
Ranunculus ficaria	+		-	-	-	-	-	-	-	-	-	-	0.5	5.5	0.5	5.5	0.5	0.5	5.5	0.5	0.5	-
Inula helenium	+		-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.5	-	-	-	-	-
Convallaria majalis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	0.5	-
Helleborus odorus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.5
Ranunculus acris	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	0.5	-
Ranunculus repens	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	0.5	0.5
Lamium maculatum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.5	-	0.5
Morus alba		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5
Scirpus sylvaticus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Myosotis arvensis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Juncus conglomeratus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lychnis flos-cuculi	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Juncus effusus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gratiola officinalis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equisetum palustre	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caltha palustris	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Filipendula ulmaria	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galium palustre	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trifolium repens	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stellaria graminea	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Holcus lanatus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Festuca pratensis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rorippa sylvestris	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glyceria notata	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veronica beccabunga	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potentilla reptans	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carex hirta	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Juncus articulatus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Juncus inflexus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mentha longifolia	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Myosoton aquaticum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poa palustris	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Typha latifolia	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Urtica dioica	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lycopus europaeus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Plantago major	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poa annua	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eleocharis palustris	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ranunculus sceleratus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lemna minor	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Glechoma hederacea	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solidago canadensis		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bidens frondosa		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oenothera biennis		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Alnus glutinosa	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aegopodium podagraria	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salix fragilis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eupatorium	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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cannabinum																						
Oenanthe banatica	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Geranium phaeum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Myosotis sparsiflora	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salix alba	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stellaria nemorum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dipsacus pilosus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salvia glutinosa	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moehringia trinervia	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lathraea squamaria	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sambucus ebulus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Artemisia absinthium	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chelidonium majus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Conium maculatum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Agrostis stolonifera	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Origanum vulgare	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Polygonum mite	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Populus x canescens	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stellaria media	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ballota nigra	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carduus acanthoides	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Capsella bursa-pastoris	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Erigeron canadensis		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Euphorbia salicifolia	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veronica hederifolia	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Veronica persica		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthriscus trichosperma	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Adoxa moschatellina	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Viola odorata	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Humulus lupulus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carex remota	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Salix purpurea	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Narcissus poeticus subsp. *poeticus*	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cynoglossum officinale	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tilia cordata	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solidago gigantea		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bidens tripartita		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Symphytum officinale	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Juncus tenuis		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Angelica sylvestris	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Campanula patula	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luzula campestris	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Torilis arvensis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Helianthus tuberosus		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gleditsia triacanthos		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phytolacca americana		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amaranthus powelii		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Juglans regia	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sorghum halepense		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reynoutria japonica		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Galinsoga parviflora		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amaranthus retroflexus		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ailanthus altissima		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AD			**100%**	**100%**	**95%**	**100%**	**95%**	**98%**	**90%**	**100%**	**100%**	**100%**	**98%**	**100%**	**100%**	**100%**	**95%**	**95%**	**95%**	**100%**	**100%**	**95%**

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Species	Native species	Invasive species	Habitat 6430						Habitat 91E0*											Average AD of the species (%)
			R1	R2	R3	R4	R5	R6	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	
Quercus frainetto	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.486%
Quercus cerris	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.743%
Potentilla micrantha	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5%
Aremonia agrimonoides	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.189%
Campanula persicifolia	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.121%
Fragaria viridis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05%
Dioscorea communis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.175%
Silene viridiflora	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.175%
Silene vulgaris	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05%
Ruscus aculeatus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Tilia tomentosa	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.148%
Silene nemoralis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Sorbus torminalis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.121%
Lychnis coronaria	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.108%
Teucrium chamaedrys	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.067%
Genista tinctoria subsp. *elatior*	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.148%
Chamaecytisus hirsutus subsp. *leucotrichus*	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.121%
Euphorbia epithymoides	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.05%
Festuca heterophylla	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.121%
Vincetoxicum hirundinaria	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.189%
Cornus mas	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.08%
Pyrus pyraster	+		-	-	-	-	-	-	-	-	-	-	-	-	0.05	-	0.05	0.05	0.05	0.07%
Lithospermum purpurocaeruleum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.31%
Acer campestre	+		-	-	-	-	-	-	-	-	0.5	-	0.05	0.05	0.05	0.05	-	-	0.05	0.33%
Brachypodium sylvaticum	+		-	-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	-	0.285%
Asparagus tenuifolius	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06%
Alliaria petiolata	+		-	0.5	0.5	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.5	0.5	0.36%
Glechoma hirsuta	+		-	-	-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.391%
Lathyrus niger	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.189%
Poa nemoralis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.135%
Carex divulsa	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.094%
Geum urbanum	+		-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.202%
Hieracium murorum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.216%
Corylus avellana	+		-	-	-	-	-	-	-	-	-	-	-	0.05	-	-	-	-	0.5	0.041%
Polygonatum latifolium	+		-	-	-	-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	0.5	-	-	0.243%
Lathyrus venetus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.270%
Scilla bifolia	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.081%
Lamium galeobdolon	+		-	-	-	-	-	-	-	-	-	0.5	0.5	-	0.5	-	0.5	0.5	0.5	0.337%
Cephalanthera longifolia	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.121%
Ruscus hypoglossum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Anemone ranunculoides	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.094%
Dentaria bulbifera	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.135%
Geranium	+		-	-	-	-	-	-	-	-	-	-	0.05	0.5	0.5	-	0.5	-	0.5	0.204%

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robertianum																				
Hedera helix	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.135%
Euphorbia amygdaloides	+		-	-	-	-	-	-	-	-	-	0.5	0.5	0.05	0.05	-	0.5	-	-	0.286%
Viola reichenbachiana	+		-	-	-	-	-	-	-	-	-	0.05	0.5	-	0.5	0.05	-	-	-	0.259%
Corydalis cava subsp. *marschalliana*	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Luzula luzuloides	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.081%
Festuca gigantea	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Epipactis purpurata	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01%
Cornus sanguinea	+		-	-	-	-	-	-	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.351%
Clematis vitalba	+		-	-	-	-	-	-	-	-	0.5	-	0.05	0.5	0.05	-	0.5	0.5	-	0.178%
Prunus spinosa	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.067%
Veronica chamaedrys	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.204%
Crataegus monogyna	+		-	-	-	-	-	-	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.31%
Rosa canina	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.013%
Galium pseudaristatum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.054%
Agrimonia eupatoria	+		-	-	-	-	-	-	0.5	0.5	0.5	-	0.5	0.05	0.5	0.05	0.5	0.05	-	0.179%
Veronica officinalis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.148%
Sedum sexangulare	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01%
Ulmus glabra	+		-	-	-	-	-	-	0.5	0.5	-	0.5	0.05	0.05	-	-	0.05	-	0.05	0.072%
Carpinus betulus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9.918%
Cerasus avium	+		-	-	-	-	-	-	0.5	-	0.5	-	0.05	-	-	-	0.5	-	-	0.15%
Fraxinus ornus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.067%
Clinopodium vulgare	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.189%
Ligustrum vulgare	+		-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	0.05	0.5	0.05	0.5	0.5	-	0.286%
Tanacetum corymbosum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.094%
Rubus caesius	+		-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.283%
Mycelis muralis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.229%
Lapsana communis	+		-	-	-	-	-	-	-	0.5	0.5	-	0.5	0.5	0.5	-	0.5	0.5	-	0.189%
Galium aparine	+		-	-	-	-	-	-	-	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.297%
Acer tataricum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.054%
Dactylis glomerata	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.148%
Fallopia dumetorum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Erigeron annuus subsp. *strigosus*		+	5.5	5.5	17.5	5.5	5.5	17.5	5.5	0.5	5.5	5.5	5.5	0.5	0.5	5.5	5.5	5.5	5.5	2.891%
Galium schultesii	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.148%
Melittis melissophyllum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.135%
Ranunculus auricomus	+		-	-	-	-	-	-	-	-	0.05	-	0.05	0.05	-	-	-	-	-	0.085%
Trifolium medium	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Erythronium dens-canis subsp. *niveum*	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.135%
Pulmonaria officinalis	+		-	-	-	-	-	-	-	-	-	0.5	-	-	0.05	0.05	0.05	0.5	-	0.193%
Inula hirta	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.013%
Carex remota	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.054%
Cruciata pedemontana	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.013%
Robinia pseudoacacia		+	-	-	-	-	-	-	0.05	-	-	-	-	0.05	0.05	-	-	-	-	0.031%
Xanthium orientale subsp. *italicum*		+	5.5	5.5	5.5	17.5	5.5	5.5	0.5	5.5	5.5	0.5	0.5	5.5	-	5.5	5.5	5.5	5.5	2.364%
Prunus cerasifera		+	-	-	-	-	-	-	0.05	-	-	-	-	0.05	0.05	-	-	-	-	0.017%
Fagus sylvatica subsp. *moesiaca*	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.797%
Asarum europaeum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.175%

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Galium odoratum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.108%
Carex digitata	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.108%
Sanicula europaea	+		-	-	-	-	-	-	-	-	-	0.5	0.05	0.05	0.5	-	0.5	0.5	0.5	0.205%
Neottia nidus-avis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.108%
Dryopteris filix-mas	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.067%
Ajuga reptans	+		-	0.5	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.175%
Melica uniflora	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.189%
Athyrium filix-femina	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Cardamine impatiens	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Tilia platyphyllos	+		-	-	-	-	-	-	-	-	0.5	0.05	0.5	0.05	-	-	0.05	0.05	0.05	0.101%
Impatiens noli-tangere	+		-	-	-	-	-	-	-	-	-	-	0.05	0.05	0.05	-	0.5	-	0.5	0.043%
Galeopsis speciosa	+		-	-	-	-	-	-	-	-	0.5	-	-	0.5	-	-	0.5	0.05	-	0.08%
Acer platanoides	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01%
Lathyrus vernus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.202%
Scrophularia nodosa	+		0.5	0.5	-	-	-	-	-	0.5	-	-	-	-	0.05	0.05	-	0.5	0.5	0.178%
Milium effusum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.054%
Acer pseudoplatanus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.054%
Cruciata glabra	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.175%
Carex pilosa	+		-	-	-	-	-	-	-	-	-	0.5	-	-	0.5	-	-	0.5	0.5	2.202%
Carex sylvatica	+		-	-	-	-	-	-	-	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	-	0.5	0.162%
Fragaria vesca	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.108%
Anemone nemorosa	+		-	-	-	-	-	-	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	-	-	0.162%
Vinca minor	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.013%
Euonymus europaeus	+		-	-	-	-	-	-	-	0.5	0.5	0.05	0.5	0.5	0.5	0.05	0.5	0.5	-	0.151%
Quercus dalechampii	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.5%
Prunella vulgaris	+		0.5	0.5	0.5	-	0.5	-	-	-	0.5	-	0.5	-	-	0.5	0.5	-	0.5	0.229%
Veronica serpyllifolia	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.081%
Fraxinus excelsior	+		-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.05	0.05	0.05	0.05	0.05	-	0.05	0.156%
Arctium lappa	+		-	-	-	-	-	-	-	-	0.5	-	0.05	0.05	0.5	0.05	0.5	0.5	0.05	0.086%
Tussilago farfara	+		-	-	-	0.5	-	-	0.5	-	-	0.05	-	0.05	0.05	0.05	0.5	0.5	0.5	0.113%
Sambucus nigra	+		-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5.5	0.5	0.31%
Lathyrus hallerstenii	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Melampyrum bihariense	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Lysimachia nummularia	+		5.5	0.5	0.5	0.5	0.5	0.5	0.5	-	0.05	0.5	0.5	0.5	0.5	0.05	0.5	0.5	-	0.408%
Silene latifolia subsp. *alba*	+		-	-	-	-	-	-	-	-	-	-	0.05	0.05	0.05	0.05	0.05	-	-	0.02%
Epilobium hirsutum	+		0.5	0.5	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.067%
Stellaria holostea	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.121%
Carex vulpina	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.054%
Circaea lutetiana	+		0.5	0.5	-	-	-	-	0.5	0.5	-	-	-	0.05	-	-	-	0.5	0.5	0.136%
Asperula taurina	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Carex pendula	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.337%
Cephalanthera damasonium	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Ambrosia artemisiifolia		+	0.5	-	-	-	-	0.5	0.05	0.5	5.5	-	0.5	0.5	-	5.5	5.5	5.5	5.5	0.825%
Sorbus domestica	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Epipactis helleborine	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Physalis alkekengi	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Aristolochia clematitis	+		-	-	-	-	-	-	0.5	0.5	0.05	-	0.5	-	0.5	-	0.5	0.5	0.5	0.15%
Polygonatum odoratum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.094%
Luzula forsteri	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Malus sylvestris	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.013%

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Dactylis polygama	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.054%
Loranthus europaeus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.054%
Lysimachia vulgaris	+		-	0.5	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.054%
Dorycnium herbaceum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Populus tremula	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Quercus robur	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.31%
Tragopogon orientalis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Ranunculus ficaria	+		-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	-	0.5	0.662%
Inula helenium	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Convallaria majalis	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Helleborus odorus	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Ranunculus acris	+		-	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	0.067%
Ranunculus repens	+		0.5	0.5	0.5	-	-	0.5	-	0.5	0.5	0.05	0.05	0.05	0.5	0.05	0.5	0.5	-	0.167%
Lamium maculatum	+		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Morus alba		+	0.5	-	-	-	-	-	0.05	-	-	-	-	0.05	0.05	-	-	-	-	0.031%
Scirpus sylvaticus	+		62.5	62.5	62.5	62.5	62.5	62.5	-	-	-	-	-	-	-	-	-	-	-	10.135%
Myosotis arvensis	+		-	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Juncus conglomeratus	+		0.5	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	0.027%
Lychnis flos-cuculi	+		-	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Juncus effusus	+		0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Gratiola officinalis	+		-	0.5	-	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	0.04%
Equisetum palustre	+		0.5	0.5	0.5	0.5	-	-	0.5	0.5	-	0.5	0.05	0.05	0.5	0.05	-	0.5	-	0.125%
Caltha palustris	+		0.5	0.5	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Filipendula ulmaria	+		-	0.5	-	0.5	-	0.5	-	-	-	-	0.05	0.5	-	-	0.5	0.05	-	0.07%
Galium palustre	+		0.5	0.5	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.054%
Trifolium repens	+		0.5	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Stellaria graminea	+		-	0.5	-	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	0.04%
Holcus lanatus	+		0.5	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Festuca pratensis	+		0.5	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	0.027%
Rorippa sylvestris	+		0.5	0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	0.081%
Glyceria notata	+		0.5	-	0.5	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	0.04%
Veronica beccabunga	+		0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Potentilla reptans	+		0.5	0.5	0.5	-	-	0.5	0.5	-	0.5	-	-	0.05	0.5	0.05	0.05	0.5	-	0.112%
Carex hirta	+		0.5	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Juncus articulatus	+		0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Juncus inflexus	+		0.5	-	-	0.5	0.5	-	0.5	-	-	-	0.05	0.05	0.5	0.05	0.5	0.5	0.5	0.112%
Mentha longifolia	+		0.5	0.5	0.5	0.5	-	0.5	-	-	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5	0.175%
Myosoton aquaticum	+		-	0.5	-	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Poa palustris	+		-	0.5	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	0.027%
Typha latifolia	+		0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Urtica dioica	+		-	-	-	0.5	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.162%
Lycopus europaeus	+		0.5	0.5	-	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-	-	0.054%
Plantago major	+		0.5	-	-	0.5	0.5	-	0.5	0.5	-	0.05	0.05	0.5	0.5	0.5	0.5	-	0.5	0.137%
Poa annua	+		0.5	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	0.027%
Eleocharis palustris	+		0.5	-	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.04%
Ranunculus sceleratus	+		-	0.5	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	0.027%
Lemna minor	+		-	5.5	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	0.162%
Glechoma hederacea	+		0.5	-	0.5	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	0.04%
Solidago canadensis		+	0.5	-	0.5	0.5	0.5	-	0.05	0.5	0.05	0.5	0.5	0.5	-	-	-	-	0.5	0.124%
Bidens frondosa		+	5.5	5.5	5.5	5.5	17.5	5.5	0.5	5.5	0.5	5.5	0.5	0.5	0.5	5.5	5.5	5.5	5.5	2.175%
Oenothera biennis		+	0.5	0.5	0.5	-	0.5	-	0.05	0.5	0.05	0.05	-	-	-	-	-	-	-	0.071%
Alnus glutinosa	+		-	-	-	-	-	-	62.5	62.5	62.5	62.5	62.5	62.5	62.5	37.5	37.5	37.5	37.5	15.878%
Aegopodium podagraria	+		-	-	-	-	-	-	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	1.635%
Salix fragilis	+		-	-	-	-	-	-	-	-	-	0.5	0.05	0.05	-	0.05	-	0.5	0.05	0.032%
Eupatorium cannabinum	+		-	-	-	-	-	-	0.5	-	-	-	0.5	0.05	-	-	-	0.5	0.5	0.055%

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Oenanthe banatica	+		-	-	-	-	-	-	-	-	-	-	0.05	-	-	-	0.05	-	-	0.002%
Geranium phaeum	+		-	-	-	-	-	-	0.5	-	0.05	0.5	0.05	0.5	-	0.5	0.05	0.5	0.5	0.085%
Myosotis sparsiflora	+		-	-	-	-	-	-	-	-	0.5	-	0.5	-	0.5	0.05	-	-	0.5	0.055%
Salix alba	+		-	-	-	-	-	-	-	-	-	0.5	-	0.05	-	-	0.05	0.05	-	0.017%
Stellaria nemorum	+		-	-	-	-	-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	-	0.5	0.081%
Dipsacus pilosus	+		-	-	-	-	-	-	-	-	-	-	-	0.05	0.05	0.05	0.5	-	-	0.017%
Salvia glutinosa	+		-	-	-	-	-	-	-	-	-	-	0.5	-	0.5	0.5	-	0.5	-	0.054%
Moehringia trinervia	+		-	-	-	-	-	-	-	-	-	0.5	0.5	0.05	0.5	0.05	-	-	-	0.043%
Lathraea squamaria	+		-	-	-	-	-	-	-	-	0.5	0.05	-	-	-	-	-	0.05	-	0.016%
Sambucus ebulus	+		-	-	-	-	-	-	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.135%
Artemisia absinthium	+		-	-	-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.121%
Chelidonium majus	+		-	-	-	-	-	-	0.5	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5	0.135%
Conium maculatum	+		-	-	-	-	-	-	-	-	-	-	-	0.05	-	-	0.5	-	0.05	0.016%
Agrostis stolonifera	+		-	-	-	-	-	-	0.5	-	0.5	0.5	0.05	0.5	0.5	0.5	0.5	0.5	-	0.109%
Origanum vulgare	+		-	-	-	-	-	-	0.5	0.5	-	-	0.05	0.05	0.5	0.05	-	0.5	0.5	0.071%
Polygonum mite	+		-	-	-	-	-	-	0.5	-	0.05	-	-	0.05	0.5	-	0.5	-	0.5	0.056%
Populus x canescens	+		-	-	-	-	-	-	0.5	0.5	-	0.5	-	0.05	0.05	0.05	-	0.05	0.05	0.047%
Stellaria media	+		-	-	-	-	-	-	0.5	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.135%
Ballota nigra	+		-	-	-	-	-	-	-	0.5	0.5	0.5	0.05	-	0.05	-	-	-	-	0.043%
Carduus acanthoides	+		-	-	-	-	-	-	0.5	-	-	-	-	-	0.05	0.05	-	-	0.5	0.029%
Capsella bursa-pastoris	+		-	-	-	-	-	-	0.5	-	0.5	0.5	0.5	-	0.5	0.5	0.5	0.5	0.5	0.121%
Erigeron canadensis		+	-	-	-	-	-	-	5.5	0.5	0.5	0.5	5.5	-	-	5.5	-	-	5.5	0.635%
Euphorbia salicifolia	+		-	-	-	-	-	-	-	-	-	0.5	0.05	-	-	0.05	0.5	-	0.5	0.043%
Veronica hederifolia	+		-	-	-	-	-	-	0.5	-	-	0.5	0.05	-	0.5	0.05	-	0.5	0.5	0.07%
Veronica persica		+	-	-	-	-	-	-	0.05	0.5	-	0.05	0.05	-	-	-	-	-	-	0.017%
Anthriscus trichosperma	+		-	-	-	-	-	-	0.5	-	0.5	-	-	-	0.5	-	0.5	0.5	0.5	0.081%
Adoxa moschatellina	+		-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	0.013%
Viola odorata	+		-	-	-	-	-	-	0.5	0.5	0.5	-	-	0.5	0.5	0.5	0.5	0.05	-	0.095%
Humulus lupulus	+		-	-	-	-	-	-	0.5	0.5	0.5	0.5	0.5	5.5	0.5	0.5	0.5	0.5	0.5	0.283%
Carex remota	+		-	-	-	-	-	-	-	0.5	0.5	-	0.05	0.5	0.5	0.05	0.5	0.5	0.5	0.097%
Salix purpurea	+		-	-	-	-	-	-	-	0.5	0.5	-	-	-	-	-	0.5	-	-	0.04%
Narcissus poeticus subsp. *poeticus*	+		-	-	-	-	-	-	-	0.5	0.5	-	-	-	-	-	-	-	-	0.027%
Cynoglossum officinale	+		-	-	-	-	-	-	-	0.5	0.5	-	-	-	0.5	0.5	-	-	-	0.054%
Tilia cordata	+		-	-	-	-	-	-	-	0.5	0.5	-	0.05	0.05	0.05	0.05	-	-	0.5	0.240%
Solidago gigantea		+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	0.013%
Bidens tripartita		+	-	-	-	-	-	-	-	-	-	-	-	0.05	-	-	-	0.5	-	0.014%
Symphytum officinale	+		-	-	-	-	-	-	-	-	-	-	0.05	0.05	-	0.5	0.5	+	0.5	0.043%
Juncus tenuis		+	-	-	-	-	-	-	-	-	-	-	0.05	-	-	-	-	-	-	0.001%
Angelica sylvestris	+		-	-	-	-	-	-	-	-	-	-	-	0.05	-	-	0.5	-	-	0.014%
Campanula patula	+		-	-	-	-	-	-	-	-	-	-	-	0.05	0.05	0.05	-	-	-	0.004%
Luzula campestris	+		-	-	-	-	-	-	-	-	0.5	-	-	0.05	0.5	0.5	-	-	-	0.041%
Torilis arvensis	+		-	-	-	-	-	-	-	-	0.5	-	0.05	0.5	-	0.5	-	+	-	0.041%
Helianthus tuberosus		+	-	-	-	-	-	-	-	-	-	0.05	-	-	-	-	-	0.5	0.5	0.028%
Gleditsia triacanthos		+	-	-	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	0.001%
Phytolacca americana		+	-	-	-	-	-	-	0.05	-	-	-	-	-	-	0.5	-	-	0.5	0.028%
Amaranthus powelii		+	-	-	-	-	-	-	0.05	0.5	5.5	-	0.5	-	-	5.5	5.5	-	5.5	0.622%
Juglans regia	+		-	-	-	-	-	-	-	-	-	-	-	0.05	0.5	-	0.5	0.05	0.05	0.031%
Sorghum halepense		+	-	-	-	-	-	-	-	-	0.05	-	-	0.05	-	-	-	-	-	0.002%
Reynoutria japonica		+	-	-	-	-	-	-	-	-	0.05	-	-	-	-	0.5	-	-	-	0.014%
Galinsoga parviflora		+	-	-	-	-	-	-	-	0.5	-	-	-	-	-	0.5	-	-	-	0.027%
Amaranthus retroflexus		+	-	-	-	-	-	-	-	-	5.5	-	-	0.5	-	-	0.5	-	-	0.175%
Ailanthus altissima		+	-	-	-	-	-	-	-	-	-	-	-	0.05	-	5.5	0.5	0.5	-	0.177%
AD			**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**95%**	**100%**	**98.675%**

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4.CONCLUSIONS

The study carried out within the plant associations specific to the types of habitats of European conservation interest identified in the basin of the Pesceana river, allowed the identification of a number of 27 invasive plant species.

The most affected habitats are those situated along the Pesceana river and along the main tributaries, respectively the priority habitat 91E0* and habitat 6430.

Invasive taxa such as *Xanthium orientale* subsp. *italicum*, *Erigeron annuus* subsp. *strigosus*, *Ambrosia artemisiifolia*, *Solidago canadensis*, *Ailanthus altissima* are represented by an increased number of individuals, especially in the associations *Aegopodio podagrariae-Alnetum glutinosae* Karpati et Jurko 1964 and *Scirpetum sylvatici* Ralski 1931 em. Schwich.

Plant associations from the forest ecosystems are less affected by invasive species compared to those in riparian areas, due to higher resilience to climate change and anthropogenic interventions, due to the stability of forest vegetation in time, compared to herbaceous vegetation. And it is also due to relatively stable ecological conditions in forests, with smaller seasonal and multiannual variations compared to those in open areas and due to lower risks of droughts, erosion and less human intervation.

Assessment of the impact of invasive species upon some natural habitats in the studied area, highlighted their ability to modify the aspect and structure of affected plant communities and decrease the number and coverage of native plants.

Therefore, minimizing anthropogenic activities in the affected habitats would help to limit the spread of invasive plant species. This could be achieved either through better waste management at the edge of localities or through its conservation within protected areas.

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