

V.A. Onyshchenko

**FORESTS OF ORDER
FAGETALIA SYLVATICAE
IN UKRAINE**

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Editor: S.L.Mosyakin

УДК 581.526.425(477)
ББК 52.82
О 58

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О 58 Ліси порядку Fagetalia sylvaticae в Україні. / Під ред. С.Л. Мосякіна. – К.:
Альтерпрес, 2009. – 212 с.
ISBN 978-966-542-417-8

Книга є першим детальним оглядом широколистяних лісів порядку Fagetalia sylvaticae в Україні. На території дослідження виділено 31 асоціацію. Вони віднесені до 9 союзів: Asperulo-Fagion, Cephalanthero-Fagion, Carpinion betuli, Quercus robur-Tilion cordatae, Scillo sibericae-Quercion robur, Tilio platyphylli-Acerion pseudoplatani, Dentario quinquefoliae-Fagion, Paenion dauricae-Quercion petraeae, Alnion incanae. Описано видовий склад та поширення синтаксонів. Подано номенклатурні типи з українських публікацій. Додаток містить 802 описи.

Рекомендовано до друку ученою радою Інституту ботаніки ім. М.Г. Холодного НАН України

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О 58 Forests of order Fagetalia sylvaticae in Ukraine./ ed.: S.L. Mosyakin. – Kyiv:
Alterpress, 2009. – 212 p.

The book is the first detailed survey of broadleaved forests of order Fagetalia sylvaticae in Ukraine. Within the study area, 31 associations are distinguished. They belong to 9 alliances: Asperulo-Fagion, Cephalanthero-Fagion, Carpinion betuli, Quercus robur-Tilion cordatae, Scillo sibericae-Quercetum robur, Tilio platyphylli-Acerion pseudoplatani, Dentario quinquefoliae-Fagion, Paenion dauricae-Quercion petraeae, and Alnion incanae. The species composition and distribution of the syntaxa are described. Nomenclatural types from Ukrainian publications are provided. The Appendix contains 802 relevés.

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ISBN 978-966-542-417-8

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1. Introduction

1.1. Basic information about Ukrainian forest vegetation

The area of Ukraine comprises four geobotanical regions (Fig. 1): European Broadleaved Forest Region, Eurosiberian Forest-steppe Region, Eurasian Steppe Region, and Submediterranean Forest Region. There are two mountain systems: the Carpathians (in the European Broadleaved Forest Region) and the Crimean Mountains (in the Submediterranean Forest Region).

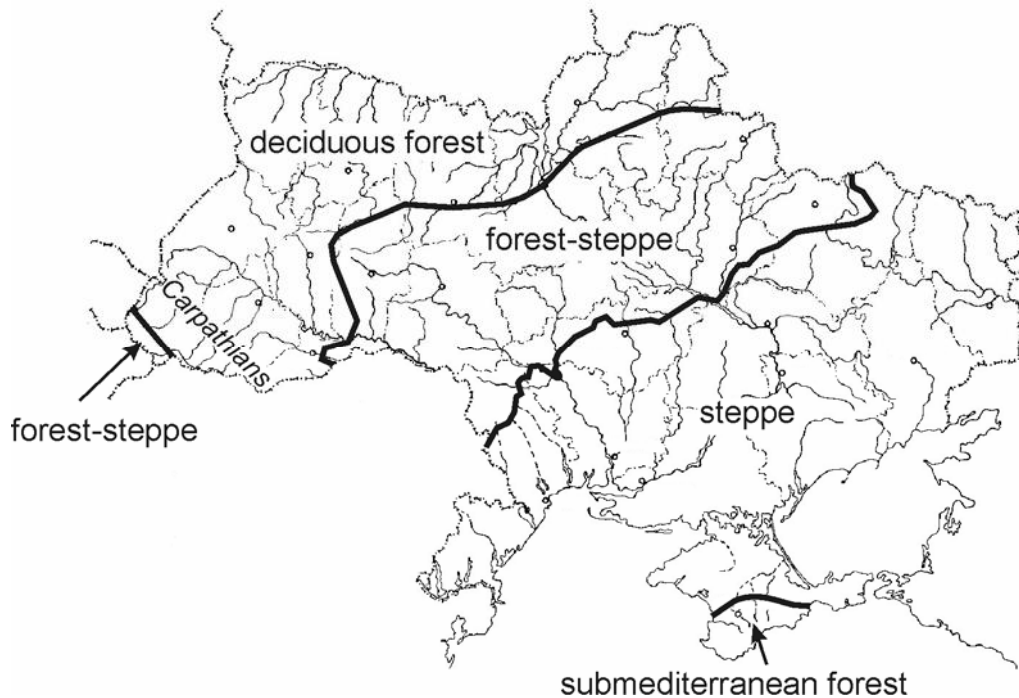


Fig. 1. Geobotanical regions of Ukraine (National Atlas of Ukraine, 2008).

Forests occupy in Ukraine 9.5 millions ha, or about 15.7% of the total area of the country. The largest areas are covered by pine (33.1%, mainly *Pinus sylvestris*), oak (24.2%, mainly *Quercus robur*), spruce (7.6%) and beech (7.3%) forests. About 30% of Ukrainian forests belong to the order Fagetalia sylvaticae.

The northern part of Ukraine (Polissia) is a fluvioglacial plain where acidic sandy soils prevails. *Pinus sylvestris* and acidophilous *Quercus robur* forests are typical of this region. Alder and oak-hornbeam forests cover lesser areas. In the Carpathians, the largest areas are dominated by *Fagus sylvatica*, *Picea abies*, and *Abies alba*. In lower peripheral parts of the Carpathians on the south-western macroslope, a considerable area is covered by *Quercus petraea* – *Carpinus betulus* forests. In plains of western Ukraine between Polissia and the Carpathians, *Fagus sylvatica* and *Quercus robur* – *Carpinus betulus* forests predominate. Forests of the forest-steppe region are represented mainly by *Quercus robur* – *Carpinus betulus* forests in the central and western parts of Ukraine, and *Quercus robur* – *Tilia cordata* forests in the eastern part of Ukraine. In the steppe region, natural broadleaved forests occupy about 1% of the region. They are dominated mainly by *Quercus robur* and *Fraxinus excelsior*. In the Crimean Mountains, main forest belts are formed by *Quercus pubescens*, *Quercus petraea* and *Fagus sylvatica* ssp. *moesiaca*.

1.2. A brief history of studies of forest vegetation diversity in Ukraine

For several decades, diversity of Ukrainian forests was studied using two main classificational approaches. The first one is the forest typology, developed and further elaborated by D.V. Vorobyov and P.S. Pohrebniak. It is used in forestry for forest inventory and planning. It is a two-dimensional scheme. The first dimension reflects soil richness, the second one shows soil humidity. Levels of richness and humidity are identified using indicator species.

Ukrainian geobotany (phytosociology) traditionally uses the dominant classification of vegetation. In this classification, associations are distinguished by combinations of dominants and subdominants of main layers. For example, the name *Carpineto-Quercetum (roboris) aegopodiosum* means that the main dominant of the tree layer is *Quercus robur*, the subdominant of the tree layer is *Carpinus betulus*, and the dominant of the herb layer is *Aegopodium podagraria*. The number of such combinations is very large: for example, the *Prodromus of vegetation of Ukraine* (1991) gives 1309 forest associations. A considerable contribution to our present knowledge of the broadleaved forests of Ukraine was made by F.O. Hryn', M.I. Kosets, V.O. Povarnitsyn, M.O. Bukhalo, Yu.R. Shelyag-Sosonko, V.M. Lyubchenko, S.O. Muliarchuk, S.M. Stoyko, L.I. Milkina, and others. Information about these forests is generalized in several monographs, e.g. *Forests of the pedunculate oak formation on the territory of Ukraine and their evolution* by Yu.R. Shelyag-Sosonko (1974, in Ukrainian), *Vegetation of the Ukrainian SSR. Forests of the Ukrainian SSR* (1971, in Ukrainian), *Geography of the plant cover of Ukraine* (1977, in Russian), *Geobotanical regionalization of Ukraine* (1977, in Ukrainian), *Plant cover of the Mountain Crimea* by Ya.P. Didukh (1992, in Russian), *Beech forests of the Podolian Upland* by V.I. Melnyk and O.M. Korinko (2005, in Ukrainian). Most publications before 1996 have no full relevés nor data on constancy of species.

The first publication about the broadleaved forests of Ukraine using the floristic approach of J. Braun-Blanquet is probably the book by W. Szafer *Las i step na zachodniem Podolu* (1935) (*Forest and steppe in West Podolia*, in Polish). In 1941, Yu.D. Kleopov in his dissertation *Analysis of the flora of broadleaved forests of the European part of the USSR* distinguished regional associations and provided their characteristics, such as constant and dominant species, geographical spectra of dominant and constant species, etc. V.V. Korzhenevskiy (1982), V.V. Korzhenevskiy and O.A. Kiseliov (1982), and L.Ya. Garkusha (1984) gave information about beech, oak and hornbeam forests of Crimea. Unfortunately, all new names of syntaxa in these works does not comply with the requirements of International Code of Phytosociological Nomenclature.

In 1996-2008, more than 30 articles and monographs have been published where Fagetalia sylvaticae forests of Ukraine were considered on the basis of the floristic classification approach. Ya.P. Didukh described new alliances and associations of the Crimean forests (1996). Some publications are devoted to the forests of Polissia (I. Solomakha et al. 1996; Vorobyov et al. 1997; Panchenko & Onyshchenko 2003; Biodiversity... 2004; Yakushenko 2004; Orlov & Yakushenko 2005; Panchenko & Onyshchenko 2005; Lukash & Onyshchenko 2006), western upland areas (Gorelov 1997; Onyshchenko 1998; Tkachyk 1999; Onyshchenko 2002; Ralo & Onyshchenko 2008; Soroka 2008); the forest-steppe region (Bayrak 1996; Shechyk et al. 1996; Shevchyk et al. 1997; Lyubchenko et al. 1997; Olefirenko 1997; Goncharenko 2001; Onyshchenko & Sidenko 2002; Goncharenko 2003; Onyshchenko & Lukash 2004; Onyshchenko & Lubinska 2006), and the steppe region (Onyshchenko et al. 2007). Data on broadleaved forests of the Carpathians and Transcarpathia are provided and discussed in articles of E. Hadač et al. (1996); V.V. Budjak and V.A. Onyshchenko (2004), V.A. Onyshchenko (2007); I.M. Danylyk and R.Ya. Kish (2008), and monographs on the flora and vegetation of national parks and nature reserves of Ukraine (Solomakha et al. 2004; Chorney et al. 2005; Klimuk et al. 2006). Beech forests of the western part of Ukraine are considered in the article of V.A. Onyshchenko (2009). In the book by Ye.O. Vorobyov and co-authors *Classification of hornbeam forests of Ukraine* (2008), Ukrainian forests of all. Carpinion are subdivided into 19 very narrow associations (10 associations are new and 4 associations are provisional). Crimean hornbeam forests are referred to 4 new associations.

1.3. Materials and methods

Publications available contain ca. 2002 relevés of order Fagetalia sylvaticae from the territory of Ukraine. In addition to the published data, ca. 917 unpublished relevés have been used for the analysis. Plot size values are from 100 m² to 2500 m², usually 400-900 m². For most relevés, the plot size is indicated in tables. The Appendix of this book contains 802 phytosociological relevés.

The databases of relevés and syntaxa were developed using the VEGPLOTS developed by the author. This program was used also for some kinds of data analyses.

In characterizations of syntaxa, dominant and constant species are presented. Constant species are species with the constancy value more than 60 %. Lists of dominants include species with average cover more than 2% (relevés without the species are treated as relevés where the species cover is 0%). Values in parentheses after names of species indicate this cover. Only species with constancy more than 20% are included in the lists of dominants.

In synoptic tables, constancies of species are given in percents. The symbol "0" means that the species is present but its constancy is lower than 0.5%. When calculating constancies of spring ephemeroids in synoptic tables, only relevés with spring data were used. Constancies of species in alliances were calculated as means of constancies of these species in associations without taking into account number of relevés and areas occupied by associations. Similarly, constancies of species in associations are calculated as means of constancies of these species in subassociations (if these subassociations are distinguished). The main criterion for the determination of differential taxa is $C_+ > 2C_- + 15\%$, where C_+ is the constancy in the positive group of syntaxa, C_- – the constancy in the negative group.

The scale of abundance used in most relevés is based on the cover of taxa: “+” – 0%, “1” – 1-4%, “2” – 5-12%, “3” – 13-25%, “4” – 26-50%, “5” – >50%. Most relevés have data both on spring and summer aspects of vegetation. The dash (“–”) in tables means that there no data on presence or absence of the species on the plot (e.g. data on spring ephemeroïds in relevés made in summer).

The order *Fagetalia sylvaticae* is delimited here in a rather traditional concept and circumscription. Acidophilous beech forests (*Luzulo-Fagion*) and eutrophic fir forests (*Galio-Abietion*) are not included in the order.

Nomenclature of species is given mainly in accordance with the nomenclatural checklist of vascular plants of Ukraine by S.L. Mosyakin and M.M. Fedoronchuk (1999), with minor corrections.

1.4. Acknowledgments

I am grateful to several experts who read the manuscript and provided their valuable comments and constructive criticism: Prof. Sergei L. Mosyakin, editor (Kyiv), Prof. Hartmut Dierschke (Göttingen), Prof. Yakiv P. Didukh (Kyiv), Prof. Tetyana L. Andrienko-Malyuk (Kyiv), Prof. Leonid M. Sapëgin (Gomel).

I express my sincere gratitude to Prof. Tetyana L. Andrienko-Malyuk (Kyiv), Dr. Vasyl V. Budzhak (Chernivtsi), Dr. Yuriy O. Karpenko (Chernihiv), Dr. Oleksandr V. Lukash (Chernihiv), Mr. Olexandr Yu. Nedorub (Poltava), Mr. Vasyl M. Ralo (Lutsk), Dr. Serhiy M. Panchenko (Sumy), Dr. Olena I. Pryadko (Kyiv), Dr. Alla I. Tokaryuk (Chernivtsi), Dr. Liliya S. Yuglichek (Khmelnysky) for their kind permission to use their unpublished relevés in the present work.

2. Classification Scheme

FAGETALIA SYLVATICAE Pawłowski 1928

Asperulo-Fagion Tüxen 1955

Eu-Fagenion Oberdorfer 1957

- ◆ *Athyrio distentifolii*-Fagetum Willner 2002
- Symphyto cordati-Fagenion Vida 1963
 - ◆ Symphyto cordati-Fagetum Vida 1959
 - *typicum*
 - *corydaletosum cavae* Onyshchenko 2008 subass. nov.
 - *lunarietosum* Onyshchenko 2008 subass. prov.
 - ◆ *Carpino*-Fagetum Pauca 1941
 - ◆ *Stellario holostea*-Fagetum Onyshchenko 2009
 - *melicetosum nutantis* Onyshchenko 2009 subass. prov.
 - *luzuletosum pilosae* Onyshchenko 2009
 - *typicum* Onyshchenko 2009
 - *corydaletosum cavae* Onyshchenko 2009

Cephalanthero-Fagion Tüxen 1955

- ◆ *Euonymo verrucosae*-Fagetum Onyshchenko 2009
 - *typicum* Onyshchenko 2009
 - *corydaletosum solidae* Onyshchenko 2009
 - *staphyleaetosum pinnatae* Onyshchenko 2009
- ◆ *Seseli libanotidis*-Fagetum Onyshchenko 2008 ass. prov.
 - *orthilietosum secundae* Onyshchenko 2008 subass. prov.
 - *vincetoxicetosum hirundinariae* Onyshchenko 2008 subass. prov.

Dentario quinquefoliae-Fagion sylvaticae Didukh 1996

- ◆ *Lathyro aurei*-Fagetum Borhidi 1962
 - *caricetosum digitatae* subass. nov.
 - *physospermetosum cornubiensi* Didukh 1996

Carpinion betuli Issler 1931

- ◆ *Circae*-Carpinetum Borhidi 2003
- ◆ *Carici pilosae*-Carpinetum Neuhäusl et Neuhäuslová 1964
- ◆ *Tilio*-Carpinetum Traczyk 1962
 - *calamagrostietosum* Traczyk 1962
 - *typicum* Traczyk 1962
 - *stachyetosum* Traczyk 1962
 - *corydaletosum* Traczyk 1962
- ◆ *Isopyro thalictroidis*-Carpinetum Onyshchenko 1998
 - *caricetosum pilosae* Onyshchenko 1998
 - *corydaletosum cavae* Onyshchenko 1998
 - *brachypodietosum sylvatici* subass. nov.
- ◆ *Galeobdolo* *lutei*-Carpinetum Shevchik et al. 1996 em. Onyshchenko et Sidenko 2002
 - *betuletosum pendulae* Shevchyk et al. 1996
 - *sambucetosum nigrae* Shevchyk et al. 1996
 - *melampyretosum nemorosi* Vorobyov et al. 2008
- ◆ *Acer platanoides*-*Tilia cordata* Jutrzenka-Trzebiatowski 1993

Quercu roboris-Tilion cordatae Solomeshch et Laivins 1993 ex Bulokhov et Solomeshch 2003

- ◆ *Mercurialio-Quercetum roboris* Bulokhov et Solomeshch 2003
 - *calamagrostietosum arundinaceae* subass. nov.
 - *typicum* subass. nov. prov.
 - *corydaletosum cavae* subass. nov. prov.

Scillo sibericae-Quercion roboris all. nov.

- ◆ *Stellario holostea*-*Aceretum platanoidis* Bajrak 1996 em. Onyshchenko et Sidenko 2002
 - *caricetosum pilosae* subass. nov.
 - *parietosum quadrifoliae* Bajrak 1996
- ◆ *Tulipo quercetorum-Quercetum roboris* ass. nov.

Paeonio dauricae-Quercion petraeae Didukh 1996

- ◆ Ranunculo constantinopolitani-Fraxinetum Didukh 1996
- ◆ Bromopsio benekenii-Carpinetum Didukh 1996
- ◆ Lasero trilobi-Carpinetum Didukh 1996 emend.
- ◆ Fago-Aceretum stevenii Borhidi 1962 nom. invers. propos.

Tilio platyphylli-Acerion pseudoplatani Klika 1955

- ◆ Arunco-Aceretum Moor 1952
- ◆ Phyllitido-Aceretum Moor 1952
- ◆ Aceri platanoidis-Fraxinetum Onyshchenko 1998
 - typicum Onyshchenko 1998
 - bromopsietosum benekenii Onyshchenko 1998
 - lunarietosum redivivae Onyshchenko 1998
- ◆ Anthrisco nitidi-Aceretum pseudoplatani Ralo et Onyshchenko 2008

Alnion incanae Pawłowski 1928

- ◆ Alnetum incanae Lüdi 1921
- ◆ Piceo-Alnetum Mráz 1959
- ◆ Ficario-Ulmetum minoris Knapp 1942 em. J.Matuszkiewicz 1976
 - chrysosplenietosum Knapp 1942 em. J.Matuszkiewicz 1976
 - typicum
 - franguletosum alni subass. nov. prov.
- ◆ Fraxino-Alnetum W.Matuszkiewicz 1952
- ◆ Aceri tatarici-Alnetum glutinosae ass. nov. prov.
- ◆ Fraxino pannonicae-Ulmetum Soó 1960
- ◆ Ornithogalo pontici-Alnetum glutinosae Didukh 1996
 - clematietosum vitalbae (Didukh 1996) stat. nov.
 - ornithogaletosum pontici (Didukh 1996) stat. nov.

3. Brief characteristics of syntaxa

3.1. Alliances

The order *Fagetalia sylvaticae* is represented in Ukraine by 9 alliances. Their differential species are given in Table 1. Three alliances represent beech forests (*Asperulo-Fagion* – typical beech forests of western and central Europe, *Cephalanthero-Fagion* – calciphilous beech forests of central Europe, *Dentario quinquefoliae-Fagion* – Crimean beech forests). *All. Tilio platyphylli-Acerion pseudoplatani* (deciduous forests of slopes, screes and ravines of central Europe) occurs in western Ukraine. Crimean mesophilous non-beech forests belong to *all. Paeonio dauricae-Quercion petraeae*. Zonal non-beech *Fagetalia sylvaticae* forests of “mainland” are represented by 3 alliances: *all. Carpinion betuli* (oak-hornbeam forests), *all. Quercu roboris-Tilion cordatae* (broadleaved forests without hornbeam in the deciduous and coniferous forest regions of eastern Europe), and *all. Scillo sibericae-Quercion roboris* (broadleaved forests of the forest-steppe and steppe regions). Hygrophilous forests of order *Fagetalia sylvaticae* belong to *all. Alnion incanae*.

Table 1. Differential species of alliances of ord. *Fagetalia sylvaticae* in the territory of Ukraine

Alliance	AF	CF	DF	PQ	C	QT	SQ	TA	Ai
Number of associations	4	2	1	4	6	1	2	4	7
Number of relevés	267	59	21	43	321	22	56	52	80

<i>Fagus sylvatica</i>	100	100	100	43	14	.	.	55	5
<i>Seseli libanotis</i>	.	29	.	.	.	.	.	.	.
<i>Astragalus glycyphyllos</i>	0	23	3	.	3	.	2	.	.
<i>Campanula persicifolia</i>	1	43	.	.	8	.	.	.	.
<i>Cardaminopsis arenosa</i>	1	42	.	.	2	.	.	2	.
<i>Carex digitata</i>	24	98	57	25	32	37	10	12	.
<i>Hepatica nobilis</i>	15	96	.	.	11	.	.	19	0
<i>Melittis sarmatica</i> + <i>M. carpatica</i>	0	48	.	.	3	.	.	.	.
<i>Polystichum aculeatum</i>	7	43	.	.	2	.	.	21	.
<i>Taxus baccata</i>	3	42	3	1	.	.	.	.	.
<i>Tilia platyphyllos</i>	.	42	.	.	.	.	.	.	.
<i>Cephalanthera damasonium</i>	2	54	39	7	2	.	.	1	.
<i>Cephalanthera longifolia</i>	8	.	35	6	4	.	.	.	.
<i>Cephalanthera rubra</i>	.	19	62	5	.	.	.	.	.
<i>Allium cyrillii</i>	.	.	4	38	.	.	.	.	.
<i>Cornus mas</i>	.	.	17	56	3	.	1	.	9
<i>Crocus tauricus</i>	.	.	15	41	.	.	.	.	.
<i>Ranunculus constantinopolitanus</i>	.	.	16	44	.	.	.	.	7
<i>Smyrniun perfoliatum</i>	.	.	.	28	.	.	.	.	.
<i>Quercus petraea</i>	4	1	35	62	15	.	.	.	1
<i>Scilla bifolia</i>	0	.	48	82	6	.	.	9	9
<i>Aegonychon purpureocaeruleum</i>	.	.	17	23	1	.	2	.	1
<i>Arum elongatum</i>	.	.	51	62	.	.	.	.	13
<i>Dentaria quinquefolia</i>	.	.	78	78	1	.	22	.	13
<i>Galanthus plicatus</i>	.	.	29	65	.	.	.	.	11
<i>Lathyrus aureus</i>	.	.	53	42	.	.	.	.	.
<i>Paeonia daurica</i>	.	.	21	36	.	.	.	.	.
<i>Physospermum cornubiense</i>	.	.	24	67	.	.	.	.	3
<i>Polygonatum odoratum</i>	.	2	92	51	9	26	2	.	2
<i>Primula acaulis</i>	.	25	53	64	2	.	.	.	14
<i>Viola dehnhardtii</i>	.	.	29	47	.	.	.	.	10
<i>Corydalis marschalliana</i>	.	.	3	48	0	.	49	.	1
<i>Scilla siberica</i>	.	.	.	25	1	.	95	.	3
<i>Torilis japonica</i>	.	.	.	3	2	.	27	1	1
<i>Tulipa quercetorum</i>	.	.	.	.	1	.	64	.	.
<i>Anthriscus nitida</i>	0	1	.	.	2	.	.	27	1

Alliance	AF	CF	DF	PQ	C	QT	SQ	TA	Ai
Arum besserianum +A.maculatum	1	1	.	.	8	.	.	39	3
Galanthus nivalis	1	10	.	.	8	.	.	33	3
Geranium phaeum	1	.	.	.	7	.	.	33	3
Lunaria rediviva	8	13	.	.	.	.	.	40	4
Melandrium dioicum	2	.	.	.	2	.	.	25	1
Polystichum braunii	1	.	.	.	.	.	.	26	.
Ranunculus lanuginosus	2	.	.	.	3	.	.	27	.
Chrysosplenium alternifolium	2	.	.	.	4	3	.	21	16
Stellaria nemorum	7	.	.	.	.	.	.	35	24
Alnus glutinosa	1	.	.	.	4	3	.	2	48
Alnus incana	1	.	.	.	2	.	.	8	29
Caltha palustris s.l.	0	.	.	.	1	.	.	.	28
Cardamine amara	2	.	.	.	.	.	.	.	19
Cirsium oleraceum	.	1	.	.	.	.	.	.	25
Filipendula ulmaria s.l.	.	.	.	.	1	.	.	17	37
Humulus lupulus	.	.	8	.	0	3	.	2	25
Ranunculus repens	1	.	.	.	2	.	.	.	34
Actaea spicata	17	46	.	.	12	.	3	50	4
Daphne mezereum	8	35	.	.	4	.	.	33	9
Phyllitis scolopendrium	1	25	.	.	.	.	.	25	.
Polypodium vulgare	3	29	.	.	9	.	.	35	1
Acer pseudoplatanus	80	98	.	.	19	.	.	93	19
Athyrium filix-femina	57	12	.	.	12	20	.	58	32
Quercus robur	13	9	.	.	65	92	94	22	38
Acer platanoides	37	96	.	.	60	100	49	55	22
Aegopodium podagraria	15	44	.	.	53	89	28	41	38
Asarum europaeum	25	74	.	.	62	100	36	57	22
Anemone ranunculoides	9	28	.	.	32	58	88	54	33
Lathyrus vernus	21	48	.	.	41	87	42	14	1
Majanthemum bifolium	21	64	.	.	39	73	.	20	4
Melica nutans	31	68	.	.	31	34	1	2	1
Rubus hirtus	52	25	.	.	24	.	.	36	11
Lamium galeobdolon	43	48	.	.	55	.	.	57	16
Viola reichenbachiana	33	35	.	5	37	.	1	19	6
Anemone nemorosa	69	50	.	.	47	3	.	49	29
Carpinus betulus	31	54	70	95	83	3	15	61	19
Cerasus avium	15	27	13	15	44	.	2	20	11
Acer tataricum	.	.	.	.	25	.	26	.	19
Ficaria verna	3	4	.	34	42	37	47	31	49

Abbreviations: AF – Asperulo-Fagion, CF – Cephalanthero-Fagion, C – Carpinion betuli, QT – Quercu roboris-Tilion cordatae, SQ – Scillo sibericae-Quercion roboris, TA – Tilio platyphylli-Acerion, A – Alnion incanae, DF – Dentario quinquefoliae-Fagion, PQ – Paeonio dauricae-Quercion petraeae

3.2. Asperulo-Fagion

All. Asperulo-Fagion Tüxen 1955 (Fagion Luquet 1926) includes typical central European beech forests on neutral rather rich soils. In Ukraine, forests of this alliance occur in the Carpathians, Cis-Carpathian Lowland, West Podillia, Roztochia. Differential species of the associations are given in Table 2.

Table 2. Differential species of associations Carpino-Fagetum, Stellario holosteae-Fagetum, Symphyto cordati-Fagetum and Athyrio distentifolii-Fagetum (data from the territory of Ukraine).

Association	Carpino-Fagetum	Stellario holosteae-Fagetum	Symphyto cordati-Fagetum	Athyrio distentifolii-Fagetum
Number of relevés	70	166	29	2
<i>Cephalanthera longifolia</i>	21	.	.	.
<i>Galium intermedium</i>	40	.	6	100
<i>Quercus petraea</i>	22	7	.	.
<i>Swida sanguinea</i>	28	13	.	.
<i>Carpinus betulus</i>	53	50	13	.
<i>Cerasus avium</i>	52	19	.	.
<i>Hedera helix</i>	34	36	.	.
<i>Hepatica nobilis</i>	12	43	.	.
<i>Lathyrus vernus</i>	28	45	.	.
<i>Pulmonaria obscura</i>	30	44	4	.
<i>Asarum europaeum</i>	17	58	4	.
<i>Dryopteris carthusiana</i>	9	60	14	.
<i>Euonymus verrucosa</i>	.	27	.	.
<i>Majanthemum bifolium</i>	.	78	6	.
<i>Polygonatum multiflorum</i>	13	68	2	.
<i>Quercus robur</i>	9	32	.	.
<i>Stellaria holostea</i>	10	50	2	100
<i>Aegopodium podagraria</i>	.	42	19	.
<i>Corydalis cava</i>	.	21	29	.
<i>Corydalis solida</i>	.	23	67	.
<i>Dryopteris dilatata</i>	1	24	42	.
<i>Phegopteris connectilis</i>	.	10	15	.
<i>Abies alba</i>	2	1	55	.
<i>Euphorbia amygdaloides</i>	20	.	24	.
<i>Symphytum cordatum</i>	1	.	74	.
<i>Polygonatum verticillatum</i>	.	3	21	50
<i>Senecio ovatus</i>	.	1	51	50
<i>Calamagrostis arundinacea</i>	.	.	6	100
<i>Cirsium erisithales</i>	.	.	.	100
<i>Gentiana asclepiadea</i>	.	.	8	100
<i>Geranium sylvaticum</i>	.	.	.	100
<i>Hypericum maculatum</i>	2	4	.	100
<i>Laserpitium latifolium</i>	.	.	.	100
<i>Lathyrus laevigatus</i>	.	.	.	100
<i>Phyteuma spicatum</i>	.	.	.	100
<i>Viola reichenbachiana</i>	60	57	14	.
Ch Symphyto cordati-Fagenion				
<i>Dentaria glandulosa</i>	31	17	86	.
<i>Rubus hirtus</i>	85	56	80	.

suball. Eu-Fagenion

In Ukraine, this suballiance is represented by one association.

Athyrio distentifolii-Fagetum Willner 2002



Fig. 2. *Athyrio distentifolii*-Fagetum in Ukraine

Synonym: *Aceri-Fagetum* J. et M. Bartsch 1940 nom. prov.

Publications: Hadač et al. 1996 (point 1, 2 rel., as *Aceri-Fagetum* Rubel 1930 ex J. et M. Bartsch 1940).

Constant species: *Acer pseudoplatanus*, *Anemone nemorosa*, *Calamagrostis arundinacea*, *Cirsium erisithales*, *Fagus sylvatica*, *Galium intermedium*, *Gentiana asclepiadea*, *Geranium sylvaticum*, *Hypericum maculatum*, *Laserpitium latifolium*, *Lathyrus laevigatus*, *Melica nutans*, *Phyteuma spicatum*, *Stellaria holostea*.

Dominants. *Fagus sylvatica* (60%); *Calamagrostis arundinacea*.

Relevés of the association are presented in Table 29.

Distribution. Upper part of the forest belt in the western part of the Ukrainian Carpathians.

Syntaxonomical notes. This association does not include a relevé from the Skolivsi Beskydy published as *Aceri-Fagetum* J. et M. Bartsch. (Solomakha et al. 2004).

suball. *Symphyto cordati-Fagenion*

The suballiance has two differential species of rather high constancy in most associations: *Dentaria glandulosa*, *Rubus hirtus*. It comprises beech forests of the Carpathians and adjacent areas. In Ukraine, this suballiance is represented by three associations: *Symphyto cordati-Fagetum* Vida 1959, *Carpino-Fagetum* Pauca 1941, *Stellario holostea-Fagetum* Onyshchenko 2009. Differential species of two associations of the suballiance and two more western associations are shown in Table 3.

Table 3. Differential species of associations *Stellario holostea-Fagetum*, *Asperulo-Fagetum* (*Galio odorati-Fagetum*), *Hordelymo-Fagetum*, *Carpino-Fagetum*.

Association	Stellario holostea-Fagetum	Carpino-Fagetum	Hordelymo-Fagetum	Asperulo-Fagetum
<i>Aegopodium podagraria</i>	42	10	3	1
<i>Dryopteris dilatata</i> s.l. (incl. <i>D. carthusiana</i>)	62	.	3	15
<i>Quercus robur</i>	32	.	.	.
<i>Rubus hirtus</i>	56	10	.	.
<i>Sambucus nigra</i>	49	10	13	9
<i>Stellaria holostea</i>	50	10	.	.
<i>Corylus avellana</i>	24	50	5	5
<i>Majanthemum bifolium</i>	78	30	4	8
<i>Populus tremula</i>	19	30	.	.
<i>Tilia cordata</i>	30	30	.	.
<i>Cephalanthera longifolia</i>	.	30	1	6
<i>Brachypodium sylvaticum</i>	5	30	8	6
<i>Dentaria glandulosa</i>	17	50	.	.

Association	Stellario holosteae- Fagetum	Carpino- Fagetum	Hordelymo- Fagetum	Asperulo- Fagetum
Galium intermedium	.	30	.	.
Lapsana communis	3	30	.	.
Lathyrus venetus	.	30	.	.
Clematis vitalba	.	30	14	6
Melica uniflora	.	30	44	15
Euphorbia amygdaloides	.	50	46	8
Arum maculatum	.	.	17	3
Campanula trachelium	8	10	26	1
Daphne laureola	.	.	39	1
Fraxinus excelsior	19	10	82	15
Hordelymus europaeus	2	10	33	1
Mercurialis perennis	7	30	87	8
Milium effusum	38	10	73	15
Tilia platyphyllos	.	10	40	11
Hieracium murorum	19	.	7	32
Prenanthes purpurea	.	.	11	43
Rubus fruticosus aggr.	.	.	8	37
Senecio ovatus	1	.	13	43
Luzula luzuloides	.	30	4	63

Notes:

data on Asperulo-Fagetum and Hordelymo-Fagetum are taken from Willner 2002;
data on Carpino-Fagetum are taken from Ivan et al. 1993.

Symphyto cordati-Fagetum Vida 1959

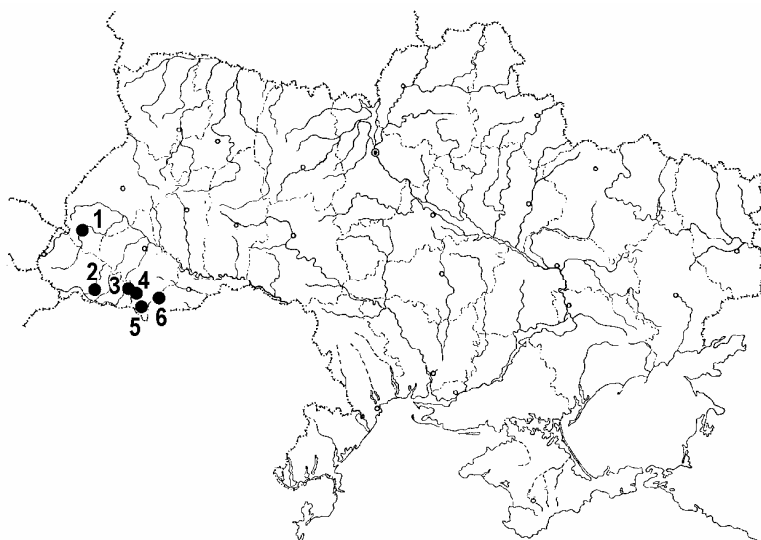


Fig. 3. Symphyto cordati-Fagetum in Ukraine

Synonym: Dentario glandulosae-Fagetum W.Matuszkiewicz 1964 ex Guzikowa et Kornaś 1968.

Publications: Budjak & Onyshchenko 2003 (point 5 on Fig. 3, 2 rel.), Solomakha et al. 2004 (point 1, 47 rel., as Dentario glandulosae-Fagetum Klika 1927 em. W.Matuszkiewicz 1964, Carici pilosae-Fagetum Oberd. 1957), Chorney et al. 2005 (point 6, 13 rel., as Dentario glandulosae-Fagetum Klika 1927 em. W.Matuszkiewicz 1964), Klimuk et al. 2006 (point 3, 8 rel.), Onyshchenko 2007 (point 2, 8 rel.).

Constant species: *Abies alba*, *Acer pseudoplatanus*, *Athyrium filix-femina*, *Dentaria glandulosa*, *Dryopteris filix-mas*, *Fagus sylvatica*, *Galium odoratum*, *Mercurialis perennis*, *Oxalis acetosella*, *Rubus hirtus*, *Senecio ovatus*.

Dominants. *Abies alba* (18%), *Acer pseudoplatanus* (5%), *Fagus sylvatica* (60%); *Dentaria glandulosa* (6%), *Lunaria rediviva* (13%, d.s. subass.), *Rubus hirtus* (3%).

Relevés of the association are presented in Table 30.

Distribution. Main association of the Carpathian mountain beech forests at altitudes 400-1200 m.

Syntaxonomical notes. In Romania, besides the *Symphyto cordati-Fagetum* s.str., the association *Pulmonario rubrae-Abieti-Fagetum* Soó 1962 is distinguished. The *Pulmonario rubrae-Abieti-Fagetum* has higher constancies of *Abies alba*, *Picea abies*, and *Oxalis acetosella* and lower constancies of *Carpinus betulus* and *Galium odoratum* than the *Symphyto cordati-Fagetum* s.str.

Variability. Differential species of subassociations are shown in Table 4.

Subass. *Symphyto cordati-Fagetum typicum*

The most widespread subassociation.

Subass. *Symphyto cordati-Fagetum corydaletosum cavae* Onyshchenko 2008

On richer and less acidic soils than subass. *typicum*.

Nomenclatural type: rel. 17 in Table 30.

Subass. *Symphyto cordati-Fagetum lunarietosum* Onyshchenko 2008 subass. prov.

On stony soils.

var. *typicum*. On silicious soils. ~ *Arunco-Aceretum* Moor 1952 s.l..

var. *Phyllitis scolopendrium*. D.s.: *Polystichum aculeatum*, *Phyllitis scolopendrium*. On calcium-rich soils. ~ *Phyllitido-Aceretum* Moor 1952.

Table 4. Differential species of subassociations of the *Symphyto cordati-Fagetum*

Subassociation	<i>typicum</i>	<i>corydaletosum cavae</i>	<i>lunarietosum redivivae</i>
Number of relevés	16	4	9
<i>Aconitum moldavicum</i>	44	.	.
<i>Dryopteris dilatata</i> s.str. + <i>D. expansa</i>	79	.	9
<i>Polygonatum verticillatum</i>	63	.	.
<i>Isopyrum thalictroides</i>	19	100	11
<i>Corydalis cava</i>	.	75	11
<i>Anemone ranunculoides</i>	.	25	20
<i>Corydalis solida</i>	.	100	100
<i>Sambucus nigra</i>	6	75	56
<i>Lunaria rediviva</i>	.	.	100

Carpino-Fagetum Pauca 1941



Fig. 4. *Carpino-Fagetum* in Ukraine

Constant species: *Acer pseudoplatanus*, *Fagus sylvatica*, *Galium odoratum*, *Rubus hirtus*.

Publications: Onyshchenko & Lukash 2005 (point 1 on Fig. 4, 9 rel.), Onyshchenko 2007 (point 2, 9 rel.).

Dominants. *Fagus sylvatica* (54%); *Dentaria glandulosa* (2%), *Galium odoratum* (3%).

Relevés of the association are presented in Table 31.

Distribution. Low peripheral regions of the Carpathians (in Ukraine mainly on the southwestern macroslope) and Cis-Carpathian lowland in Chernivtsi Region. The main range of this association is located in Romania.

Syntaxonomical notes. Similar beech forests in Slovakia are referred to associations *Asperulo-Fagetum Sougnez et Thill 1959*, *Dentario bulbiferae-Fagetum Zlatník 1935*, and *Carici pilosae-Fagetum Oberdorfer 1953*.

Stellario holostea-Fagetum Onyshchenko 2009

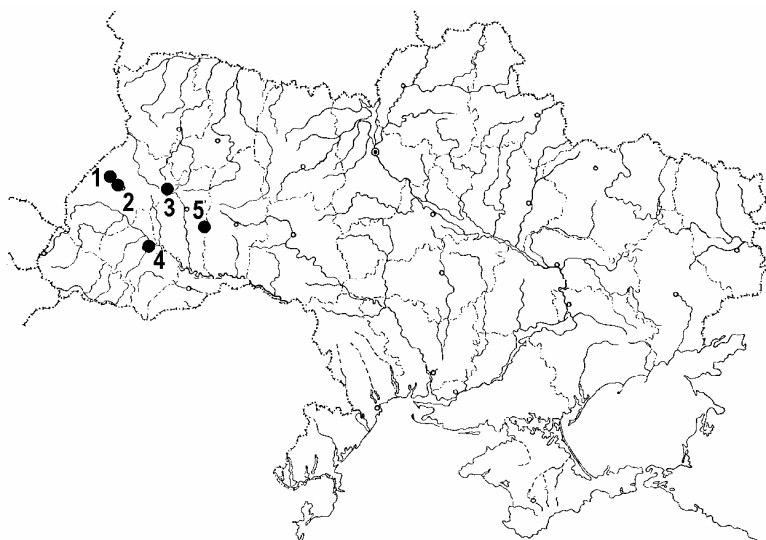


Fig. 5. *Stellario holostea-Fagetum* in Ukraine

Synonym: *Dentario glandulosae-Fagetum* W.Matuszkiewicz 1964 ex Guzikowa et Kornaś 1968 (colline form).

Publications: Gorelov 1997 (point 2 on Fig. 5, 11 rel. as *Carici pilosae-Fagetum* Oberd. 1957), Onyshchenko 1998 (point 5, 4 rel. as *Galio odorati-Fagetum Sougnez et Thill 1959 sensu lato*), Tkachyk 1999 (point 1, 48 rel.), Melnyk & Korinko 2005 (point 5, 10 rel.), Soroka 2008 (points 1 and 2, 15 rel. as *Dentario glandulosae-Fagetum* W.Matuszkiewicz 1964 ex Guzikowa et Kornaś 1968 and *Carici pilosae-Fagetum* Moor 1952).

Constant species: *Acer platanoides*, *Acer pseudoplatanus*, *Anemone nemorosa*, *Carex digitata*, *Dryopteris filix-mas*, *Fagus sylvatica*, *Galium odoratum*, *Lamium galeobdolon*, *Majanthemum bifolium*, *Polygonatum multiflorum*.

Dominants. *Fagus sylvatica* (75%), *Quercus robur* (4%); *Aegopodium podagraria* (2%), *Anemone nemorosa* (22%), *Asarum europaeum* (4%), *Carex pilosa* (3%), *Galium odoratum* (4%), *Hedera helix* (5%), *Lamium galeobdolon* (7%), *Majanthemum bifolium* (7%).

Relevés of the association are presented in Tables 32-37.

Nomenclatural type: rel. 1 in Table 34 (nomenclatural type of subass. typicum).

Distribution. North of the Carpathians (altitudes 200-450 m).

Syntaxonomical notes. Colline beech forests of southeastern Poland, which are usually referred to *Dentario glandulosae-Fagetum* W.Matuszkiewicz 1964 ex Guzikowa et Kornaś 1968, may be classified to the *Stellario holostea-Fagetum*.

Variability. Differential species of subassociations are shown in Table 5.

Subass. *Stellario holostea-Fagetum melicetosum nutantis* Onyshchenko 2009 subass. prov.

On nutrient-poor soils. Relevés from Roztochia Nature Reserve only (point 1 on Fig. 5).

Subass. *Stellario holostea-Fagetum luzuletosum pilosae* Onyshchenko 2009

On acidic rather rich soils. All relevés are from Verkhniobuzke Pasma (Lviv Region, Zolochiv and Brody Districts) (point 3 on Fig. 5).

Nomenclatural type: rel. 4 in Table 33.

Subass. *Stellario holostea-Fagetum typicum* Onyshchenko 2009

Nomenclatural type: rel. 1 in Table 34 (nomenclatural type of the association).

var. *typicum*

var. *Sanicula europaea* (d.s.: *Actaea spicata*, *Ajuga reptans*, *Geum urbanum*, *Hedera helix*, *Ranunculus cassubicus*, *Sanicula europaea*, *Stachys sylvatica*, *Viola mirabilis*).

Subass. *Stellario holostea-Fagetum corydaletosum cavae* Onyshchenko 2009

Nomenclatural type: rel. 10 in Table 36.

On richer soils than other subassociations.

var. *typicum*.

var. *Viola mirabilis* (d.s.: *Aposoeris foetida*, *Carex digitata*, *Campanula trachelium*, *Carex pilosa*, *Melica nutans*, *Swida sanguinea*, *Viola mirabilis*).

var. *Phegopteris connectilis* (d.s.: d.s. var. *Viola mirabilis* + *Huperzia selago*, *Luzula pilosa*, *Phegopteris connectilis*).

var. *Arum alpinum* (d.s.: *Arum alpinum*, *Carex brizoides*, *Dentaria bulbifera*, *Leucojum vernum*).

Table 5. Differential species of subassociations of the *Stellario holostea*-Fagetum

Subassociation	melicetosum nutantis	luzuletosum pilosae	typicum	corydaletosum cavae
Number of relevés	33	10	51	58
<i>Convallaria majalis</i>	27	.	.	.
<i>Melica nutans</i>	55	.	7	10
<i>Dryopteris dilatata</i> s. str. + <i>D. expansa</i>	.	70	2	23
<i>Hieracium sabaudum</i> s.l.	.	40	.	.
<i>Hieracium murorum</i> s.l.	.	70	2	3
<i>Luzula pilosa</i>	30	80	26	10
<i>Huperzia selago</i>	6	60	7	7
<i>Orthilia secunda</i>	.	60	.	2
<i>Phegopteris connectilis</i>	.	30	.	10
<i>Veronica officinalis</i>	.	60	2	5
<i>Anemone ranunculoides</i>	.	.	.	72
<i>Circaea lutetiana</i>	15	20	7	48
<i>Corydalis cava</i>	.	.	.	84
<i>Corydalis solida</i>	.	.	7	84
<i>Dentaria glandulosa</i>	.	.	4	64
<i>Ficaria verna</i>	.	.	4	45
<i>Gagea lutea</i>	.	.	.	57
<i>Geranium robertianum</i>	6	.	20	81
<i>Isopyrum thalictroides</i>	.	30	26	88
<i>Stachys sylvatica</i>	12	10	22	76
<i>Sambucus racemosa</i>	55	40	35	7
<i>Sorbus aucuparia</i>	6	60	39	7
<i>Aegopodium podagraria</i>	6	10	61	91
<i>Paris quadrifolia</i>	6	.	33	62
<i>Pulmonaria obscura</i>	9	10	65	93
<i>Ranunculus cassubicus</i>	.	.	17	45
<i>Athyrium filix-femina</i>	12	80	76	71
<i>Oxalis acetosella</i>	9	50	59	50
<i>Dryopteris carthusiana</i>	9	100	74	55
<i>Hedera helix</i>	.	40	48	55
<i>Viola reichenbachiana</i>	.	60	87	83
<i>Picea abies</i>	3	50	35	22
<i>Poa nemoralis</i>	9	80	48	48
<i>Sambucus nigra</i>	.	30	76	88
<i>Scrophularia nodosa</i>	.	40	35	62

3.3. Cephalanthero-Fagion

All. Cephalanthero-Fagion Tüxen 1955 includes calciphilous central European beech forests. In Ukraine, forests of this alliance are known in the Carpathians (*Seseli libanotidis-Fagetum* Onyshchenko 2008 ass. prov.) and West Podillia (*Euonymo verrucosae-Fagetum* Onyshchenko 2009). They do not occupy large areas. Their mutual differential species are shown in Table 6. Differential species of the *Euonymo verrucosae-Fagetum* Onyshchenko 2009 versus the *Cephalanthero-Fagetum* Oberdorfer 1957 are given in Table 7, those of the *Taxo-Fagetum* Etter 1947 versus *Seseli libanotidis-Fagetum* Onyshchenko 2008 – in Table 8.

Table 6. Main differential species of *Euonymo verrucosae-Fagetum* and *Seseli libanotidis-Fagetum*

Association	<i>Euonymo verrucosae-Fagetum</i>	<i>Seseli libanotidis-Fagetum</i>
Number of relevés	54	5
<i>Actaea spicata</i>	93	.
<i>Aegopodium podagraria</i>	89	.
<i>Ajuga reptans</i>	83	.
<i>Anemone nemorosa</i>	100	.
<i>Convallaria majalis</i>	63	.
<i>Daphne mezereum</i>	72	.
<i>Euonymus verrucosa</i>	98	.
<i>Lamium galeobdolon</i>	96	.
<i>Lathyrus vernus</i>	96	.
<i>Neottia nidus-avis</i>	89	.
<i>Pulmonaria obscura</i>	94	.
<i>Sanicula europaea</i>	83	.
<i>Scrophularia nodosa</i>	69	.
<i>Swida sanguinea</i>	89	.
<i>Tilia cordata</i>	65	.
<i>Viola mirabilis</i>	91	.
<i>Viola reichenbachiana</i>	72	.
<i>Asplenium trichomanes</i>	.	100
<i>Cardaminopsis arenosa</i>	.	80
<i>Calamagrostis arundinacea</i>	.	80
<i>Galium intermedium</i>	.	100
<i>Polystichum aculeatum</i>	4	80
<i>Rosa pendulina</i>	.	80
<i>Taxus baccata</i>	.	80
<i>Tilia platyphyllos</i>	.	80

Table 7. Differential species of associations *Cephalanthero-Fagetum* and *Euonymo verrucosae-Fagetum*

Association	<i>Cephalanthero-Fagetum</i> s.str. [Willner 2002]	<i>Euonymo verrucosae-Fagetum</i>
Number of relevés	122	54
<i>Campanula rapunculoides</i>	30	.
<i>Carex flacca</i>	50	.
<i>Galium sylvaticum</i>	70	.
<i>Melica uniflora</i>	30	.
<i>Phyteuma spicatum</i>	30	.
<i>Rosa arvensis</i>	30	.
<i>Quercus petraea</i>	50	3
<i>Vicia sepium</i>	50	.
<i>Viburnum lantana</i>	30	.
<i>Viola mirabilis</i>	7	88

Association	Cephalanthero- Fagetum s.str. [Willner 2002]	Euonymo verrucosae- Fagetum
<i>Aposeris foetida</i>	.	42
<i>Astragalus glycyphyllos</i>	.	40
<i>Euonymus europaea</i>	7	68
<i>Euonymus verrucosa</i>	.	94
<i>Aegopodium podagraria</i>	15	89
<i>Cruciata glabra</i>	.	25
<i>Lathyrus niger</i>	.	23
<i>Platanthera chlorantha</i>	.	40
<i>Majanthemum bifolium</i>	2	88
<i>Tilia cordata</i>	.	65
<i>Melittis sarmatica</i> (<i>Melittis melissophyllum</i> s.l.)	15	55
<i>Carex pilosa</i>	3	20
<i>Campanula persicifolia</i>	15	51
<i>Staphylea pinnata</i>	.	26

Table 8. Differential species of associations Taxo-Fagetum and *Seseli libanotidis*-Fagetum

Association	Taxo-Fagetum [Willner 2002]	<i>Seseli libanotidis</i> - Fagetum
Number of relevés	105	5
<i>Hordelymus europaeus</i>	30	.
<i>Carex flacca</i>	70	.
<i>Phyteuma spicatum</i>	70	.
<i>Pinus sylvestris</i>	50	.
<i>Rubus fruticosus</i>	50	.
<i>Carex alba</i>	50	.
<i>Sesleria albicans</i>	50	.
<i>Lonicera alpigena</i>	70	.
<i>Moehringia muscosa</i>	2	40
<i>Seseli libanotis</i>	.	60
<i>Tilia platyphyllos</i>	7	80
<i>Galium album</i> s.l.	.	40
<i>Rubus hirtus</i>	.	60

Euonymo verrucosae-Fagetum Onyshchenko 2009



Fig. 6. *Euonymo verrucosae*-Fagetum in Ukraine

Constant species: *Acer platanoides*, *Acer pseudoplatanus*, *Actaea spicata*, *Aegopodium pofagraris*, *Ajuga reptans*, *Anemone nemorosa*, *Asarum europaeum*, *Campanula trachelium*, *Carex digitata*, *Carpinus betulus*, *Cephalanthra damasonium*, *Convallaria majalis*, *Corylus avellana*, *Daphne mezereum*, *Epipactis helleborine*, *Fagus sylvatica*, *Fraxinus excelsior*, *Galium odoratum*, *Hepatica nobilis*, *Lamium galeobdolon*, *Lathyrus vernus*, *Majanthemum bifolium*, *Melica nutans*, *Mercurialis perennis*, *Mycelis muralis*, *Neottia nidus-avis*, *Poa nemoralis*, *Polygonatum multiflorum*, *Sanicula europaea*, *Scrophularia nodosa*, *Swida sanguinea*, *Tilia cordata*, *Ulmus glabra*, *Viola mirabilis*, *Viola reichenbachiana*.

Dominants. *Acer platanoides* (5%), *Acer pseudoplatanus* (7%), *Fagus sylvatica* (76%), *Fraxinus excelsior* (4%); *Staphylea pinnata* (3%); *Anemone nemorosa* (27%), *Asarum europaeum* (7%), *Convallaria majalis* (2%), *Galium odoratum* (5%), *Hedera helix* (9%), *Hepatica nobilis* (3%), *Lamium galeobdolon* (5%), *Lathyrus vernus* (3%), *Majanthemum bifolium* (4%), *Mercurialis perennis* (3%).

Relevés of the association are presented in Table 38-39.

Nomenclatural type: rel. 14 in Table 39 (nomenclatural type of subass. corydaletosum solidae).

Distribution: Rare association of West Podillia. On soils on eluvium of limestone.

Variability. Differential species of subassociations are shown in Table 9.

Subass. *Euonymo verrucosae*-Fagetum typicum Onyshchenko 2009

Central subassociation. Nomenclatural type: rel. 11 in Table 38.

Subass. *Euonymo verrucosae*-Fagetum staphyleaetosum pinnatae Onyshchenko 2009

The richest in termophilous and calciphilous species subassociation. Nomenclatural type: rel. 24 in Table 38.

Subass. *Euonymo verrucosae*-Fagetum corydaletosum solidae Onyshchenko 2009

More nitrophilous subassociation. Nomenclatural type: rel. 14 in Table 39 (nomenclatural type of the association).

Table 9. Differential species of subassociations of the *Euonymo verrucosae*-Fagetum

Subassociation	typicum	corydaletosum solidae	staphyleaetosum pinnatum
Number of relevés	18	22	14
<i>Solidago virgaurea</i>	17	.	7
<i>Anemone ranunculoides</i>	.	77	14
<i>Corydalis cava</i>	.	41	.
<i>Corydalis solida</i>	.	68	.
<i>Dentaria glandulosa</i>	.	23	.
<i>Ficaria verna</i>	.	23	.
<i>Gagea lutea</i>	.	23	.
<i>Geranium robertianum</i>	11	55	.
<i>Isopyrum thalictroides</i>	17	86	7
<i>Aconitum besserianum</i>	.	.	64
<i>Cimicifuga europaea</i>	6	.	50
<i>Lonicera xylostium</i>	11	18	79

Subassociation	typicum	corydaletosum solidae	staphyleaetosum pinnatum
Pyrethrum corymbosum	.	5	29
Staphylea pinnata	.	9	93
Clematis recta	22	5	57
Laserpitium latifolium	.	.	21
Veratrum nigrum	.	.	21
Vincetoxicum hirundinaria	6	.	29
Geum urbanum	17	18	.

Seseli libanotidis-Fagetum Onyshchenko 2008 ass. prov.



Fig. 7. Seseli libanotidis-Fagetum in Ukraine

Constant species: *Acer platanoides*, *Acer pseudoplatanus*, *Asplenium trichomanes*, *Calamagrostis arundinacea*, *Cardaminopsis arenosa*, *Carex digitata*, *Dryopteris filix-mas*, *Fagus sylvatica*, *Galium intermedium* s.l., *Mercurialis perennis*, *Polystichum aculeatum*, *Rosa pendulina*, *Sorbus aucuparia*, *Taxus baccata*, *Tilia platyphyllos*.

Publications: Onyshchenko 2007 (point 1 on Fig. 7, 5 rel.).

Dominants. *Acer platanoides* (5%), *Acer pseudoplatanus* (8%), *Fagus sylvatica* (66%), *Fraxinus excelsior* (4%), *Tilia platyphyllos* (7%); *Mercurialis perennis* (3%).

Relevés of the association are presented in Table 40.

Distribution: Rare association of the Carpathians. On stony soils on eluvium of limestone at altitudes 600-1000 m a.s.l.

Variability. Differential species of subassociations are shown in Table 10.

Subass. Seseli libanotidis-Fagetum vincetoxicetosum hirundinariae Onyshchenko 2008 subass. prov.

Nitrophilous subassociation on warm (south) slopes.

Subass. Seseli libanotidis-Fagetum orthilietosum secundae Onyshchenko 2008 subass. prov.

Less nitrophilous and more acidophilous subassociation on cool (north) slopes.

Table 10. Differential species of subassociations of the Seseli libanotidis-Fagetum

Subassociation	orthilietosum secundae	vinctoxicetosum hirundinariae
Number of relevés	3	2
<i>Asplenium viride</i>	100	.
<i>Majanthemum bifolium</i>	67	.
<i>Melittis carpatica</i>	67	.
<i>Orthilia secunda</i>	67	.
<i>Vaccinium myrtillus</i>	67	.
<i>Valeriana tripteris</i>	67	.
<i>Asarum europaeum</i>	.	100
<i>Carpinus betulus</i>	.	100

Subassociation	orthilietosum secundae	vincetoxicetosum hirundinariae
Campanula trachelium	.	100
Corydalis cava	.	100
Corydalis solida	.	100
Cystopteris fragilis	.	100
Dentaria bulbifera	.	100
Geranium robertianum	.	100
Geum urbanum	.	100
Glechoma hirsuta	.	100
Helleborus purpurascens	.	100
Phyllitis scolopendrium	.	100
Polygonatum multiflorum	.	100
Primula acaulis	.	100
Hylotelephium polonicum	.	100
Vincetoxicum hirundinaria	.	100

3.4. *Dentario quinquefoliae*-*Fagion sylvaticae*

Mesophilous forests of ord. *Fagetalia sylvaticae* in Crimea are represented by two alliances: *Dentario quinquefoliae*-*Fagion sylvaticae* Didukh 1996 (beech forests) and *Paeonio dauricae*-*Quercion petraeae* Didukh 1996 (oak, hornbeam, ash, and maple forests). Constancies of differential species of these alliances are shown in Table 11. According to the scheme which is used in this survey the *Dentario quinquefoliae*-*Fagion sylvaticae* includes one broadly circumscribed association *Lathyro aurei*-*Fagetum* Borhidi 1962.

Table 11. Differential species of alliances *Dentario quinquefoliae*-*Fagion sylvaticae* and *Paeonio dauricae*-*Quercion petraeae*

Alliance	<i>Dentario quinquefoliae</i> - <i>Fagion sylvaticae</i>	<i>Paeonio dauricae</i> - <i>Quercion petraeae</i>
Number of relevés	21	54
<i>Cephalanthera damasonium</i>	39	7
<i>Cephalanthera longifolia</i>	35	6
<i>Cephalanthera rubra</i>	62	5
<i>Corallorhiza trifida</i>	18	.
<i>Epipactis helleborine</i>	56	11
<i>Fagus sylvatica</i> ssp. <i>moesiaca</i>	100 ⁵	43
<i>Neottia nidus-avis</i>	81	31
<i>Platanthera chlorantha</i>	78	19
<i>Allium cyrillii</i>	4	34
<i>Brachypodium sylvaticum</i>	.	17
<i>Cornus mas</i>	17	56
<i>Corydalis marschalliana</i>	3	42
<i>Corydalis paczoskii</i> (<i>Corydalis solida</i> s.l.)	.	25
<i>Dictamnus gymnostylis</i>	.	17
<i>Ficaria verna</i>	.	26
<i>Galium aparine</i>	.	31
<i>Lathyrus niger</i>	.	17
<i>Scilla siberica</i>	.	22
<i>Smyrniium perfoliatum</i>	.	27
<i>Viola odorata</i>	4	39

Lathyro aurei-Fagetum Borhidi 1962



Fig. 8. *Lathyro aurei*-Fagetum in Ukraine

Publications: Didukh 1996.

Constant species: *Arum elongatum*, *Dentaria quinquefolia*, *Euphorbia amygdaloides*, *Fagus sylvatica* ssp. *moesiaca*, *Galium odoratum*, *Neottia nidus-avis*, *Polygonatum odoratum*, *Primula acaulis*, *Scilla bifolia*.

Dominants. *Carpinus betulus* (5%), *Fagus sylvatica* ssp. *moesiaca* (75%), *Fraxinus excelsior* (3%).

Relevés of the association are presented in Table 41.

Distribution. The Crimean Mountains at altitudes (300) 500-1200 (1300) m a.s.l. The main forest association at altitudes over 600 m.

Variability. Differential species of subassociations are shown in Table 12.

Subass. *Lathyro aurei*-Fagetum physospermetosum cornubiensi Didukh 1996

On rather rich soils.

Nomenclatural type: rel. 16 in Table 41.

Subass. *Lathyro aurei*-Fagetum caricetosum digitatae subass. nov.

Nomenclatural type: rel. 20 in Table 41.

On poorer soils than subass. *Lathyro aurei*-Fagetum physospermetosum cornubiensi.

Table 12. Differential species of subassociations of the *Lathyro aurei*-Fagetum Borhidi 1962

Subassociation	caricetosum digitatae	physospermetosum cornubiensi
Number of relevés	5	16
<i>Carex digitata</i>	100	13
<i>Hieracium gentile</i> (H. murorum s.l.)	20	.
<i>Orthilia secunda</i>	20	.
<i>Milium effusum</i>	60	6
<i>Poa nemoralis</i>	100	31
<i>Populus tremula</i>	60	.
<i>Pyrola chlorantha</i>	20	.
<i>Tilia cordata</i>	60	.
<i>Acer campestre</i>	.	69
<i>Arum elongatum</i>	20	81
<i>Anthriscus sylvestris</i>	.	50
<i>Bromopsis benekenii</i>	.	25
<i>Crocus tauricus</i>	.	38
<i>Euphorbia amygdaloides</i>	.	88
<i>Euonymus verrucosa</i>	.	31
<i>Geranium robertianum</i>	.	19
<i>Ligustrum vulgare</i>	.	25
<i>Mercurialis perennis</i>	.	69
<i>Paeonia daurica</i>	.	31
<i>Physospermum cornubiense</i>	.	44
<i>Primula acaulis</i>	20	88
<i>Ranunculus constantinopolitanus</i>	.	31
<i>Scilla bifolia</i>	20	75
<i>Viola dehnhardtii</i>	.	62
<i>Urtica dioica</i>	.	25

3.5. Carpinion betuli

All. Carpinion betuli Issler 1931 includes central European oak-hornbeam forests. Forests of this alliance occurs in the western, northern and central parts of Ukraine. Constancies of differential species of the Ukrainian associations are shown in Table 13.

Table 13. Differential species of associations Circaeo-Carpinetum, Carici pilosae-Carpinetum, Tilio-Carpinetum, Isopyro thalictroidis-Carpinetum, Galeobdolo lutei-Carpinetum, Acer platanoides-Tilia cordata

Association	TC	IC	GC	CpC	CC	AT
Number of relevés	69	113	102	10	19	8
<i>Betula pendula</i>	58	12	20	.	.	13
<i>Pinus sylvestris</i>	29	1	3	.	.	.
<i>Oxalis acetosella</i>	38	.	.	.	21	.
<i>Allium ursinum</i>	.	21	3	.	5	.
<i>Arum besserianum</i>	.	46	.	.	.	.
<i>Galanthus nivalis</i>	14	33	5	.	.	.
<i>Isopyrum thalictroides</i>	24	59	1	20	16	.
<i>Polygonatum hirtum</i>	.	74	16	.	5	.
<i>Viburnum lantana</i>	.	60	13	.	.	.
<i>Corydalis intermedia</i>	.	.	29	.	.	.
<i>Melica uniflora</i>	.	6	.	20	.	.
<i>Fagus sylvatica</i>	3	3	.	50	26	.
<i>Frangula alnus</i>	15	2	1	50	11	.
<i>Galium intermedium</i>	13	12	1	60	5	.
<i>Hieracium sp.</i>	.	.	.	60	.	.
<i>Ligustrum vulgare</i>	.	.	1	60	.	.
<i>Luzula luzuloides</i>	.	.	.	50	.	.
<i>Quercus petraea</i>	.	0	1	90	.	.
<i>Rosa canina</i>	.	5	9	40	5	.
<i>Staphylea pinnata</i>	.	.	.	20	.	.
<i>Symphytum tuberosum</i>	.	.	.	90	.	.
<i>Carex brizoides</i>	28	.	0	.	63	.
<i>Crocus heuffelianus</i>	.	.	.	20	74	.
<i>Fraxinus angustifolia</i>	.	.	.	.	42	.
<i>Leucjum vernum</i>	.	.	.	.	21	.
<i>Anthriscus sylvestris</i>	.	1	.	.	.	25
<i>Hylotelephium polonicum</i>	.	8	15	10	.	50
<i>Melica nutans</i>	31	33	25	.	16	88
<i>Polypodium vulgare</i>	1	.	4	10	.	38
<i>Viscaria vulgaris</i>	.	.	4	.	.	25
<i>Sorbus aucuparia</i>	37	0	15	.	5	50
<i>Polygonatum odoratum</i>	22	.	11	.	.	25
<i>Geranium phaeum</i>	2	19	.	.	21	.
<i>Corydalis solida</i>	28	77	81	10	.	.
<i>Viola odorata</i>	7	46	67	.	.	.
<i>Euphorbia amygdaloides</i>	.	10	.	30	26	.
<i>Hedera helix</i>	.	2	.	80	58	.
<i>Rubus hirtus</i>	1	.	.	80	63	.
<i>Luzula pilosa</i>	41	.	.	20	.	25
<i>Hepatica nobilis</i>	15	30	.	.	21	.
<i>Carex sylvatica</i>	7	22	4	20	47	.
<i>Geum urbanum</i>	14	73	60	.	42	.
<i>Lamium maculatum</i>	6	35	24	.	5	63
<i>Ulmus glabra</i>	17	67	44	.	11	50
<i>Anemone nemorosa</i>	84	33	4	70	89	?
<i>Viola reichenbachiana</i>	28	57	12	60	68	.
<i>Carex pilosa</i>	40	48	53	80	.	13
<i>Acer campestre</i>	.	77	65	30	68	.
<i>Cerasus avium</i>	14	63	23	90	53	.
<i>Crataegus curvisepala</i>	4	35	39	80	42	.
<i>Swida sanguinea</i>	4	53	21	70	37	.
<i>Convallaria majalis</i>	43	51	43	.	.	50
<i>Euonymus verrucosa</i>	30	71	68	.	5	100
<i>Viola mirabilis</i>	29	64	44	.	.	25

Association	TC	IC	GC	CpC	CC	AT
<i>Quercus robur</i>	85	83	80	.	68	75
<i>Carpinus betulus</i>	100	100	99	90	95	13

Abbreviations: TC – Tilio-Carpinetum, IC – Isopyro thalictroidis-Carpinetum, GC – Galeobdolon lutei-Carpinetum, CpC – Carici pilosae-Carpinetum, CC – Circaeum-Carpinetum, AT – Acer platanoides-Tilia cordata

Circaeum-Carpinetum Borhidi 2003



Fig. 9. Circaeum-Carpinetum in Ukraine

Synonym: *Quercus roboris*-Carpinetum Soó et Pócs 1957

Publications: Onyshchenko & Lukash 2005 (point 1 on Fig. 9, 12 rel. as *Fraxino pannonicum*-Carpinetum Soó et Borhidi in Soó 1962).

Constant species: *Acer campestre*, *Aegopodium podagraria*, *Ajuga reptans*, *Anemone nemorosa*, *Asarum europaeum*, *Carex brizoides*, *Carpinus betulus*, *Crocus heuffelianus*, *Euonymus europaea*, *Galium odoratum*, *Lamium galeobdolon*, *Polygonatum multiflorum*, *Quercus robur*, *Rubus hirtus*, *Stellaria holostea*, *Tilia cordata*, *Viola reichenbachiana*.

Dominants. *Carpinus betulus* (53%), *Fraxinus angustifolia* (4%), *Quercus robur* (32%); *Anemone nemorosa* (20%), *Carex brizoides* (6%), *Hedera helix* (7%), *Lamium galeobdolon* (5%), *Stellaria holostea* (2%).

Relevés of the association are presented in Table 42.

Distribution. Zonal association of the Transcarpathian Lowland. Its non-typical variant occurs in the Cis-Carpathian Lowland in Chernivtsi Region.

Carici pilosae-Carpinetum Neuhäusl et Neuhäuslová 1964



Fig. 10. Carici pilosae-Carpinetum in Ukraine

Synonyms: Quercus petraeae-Carpinetum Soó et Pócs 1957; Brachypodio sylvatici-Quercetum petraeae Kramarets et al. 1992.

Publications: Onyshchenko & Lukash 2005 (point 2, 10 rel.); Vorobyov et al. 2008 (points 2-3, 29 rel.).

Constant species: *Anemone nemorosa*, *Carex pilosa*, *Carpinus betulus*, *Cerasus avium*, *Crataegus curvisepala* s.l., *Hedera helix*, *Poa nemoralis*, *Quercus petraea*, *Rubus hirtus*, *Stellaria holostea*, *Swida sanguinea*.

Dominants. *Quercus petraea* (34%), *Carpinus betulus* (33%); *Swida sanguinea* (7%); *Anemone nemorosa* (4%), *Carex pilosa* (3%), *Rubus hirtus* (2%).

Relevés of the association are presented in Table 43.

Distribution. This association forms the lower belt of the Carpathians (together with Carpino-Fagetum Pauca 1941) at altitudes 100-500 m a.s.l. In Ukraine it is known only on the southwestern macroslope of the Carpathians.

Tilio-Carpinetum Traczyk 1962

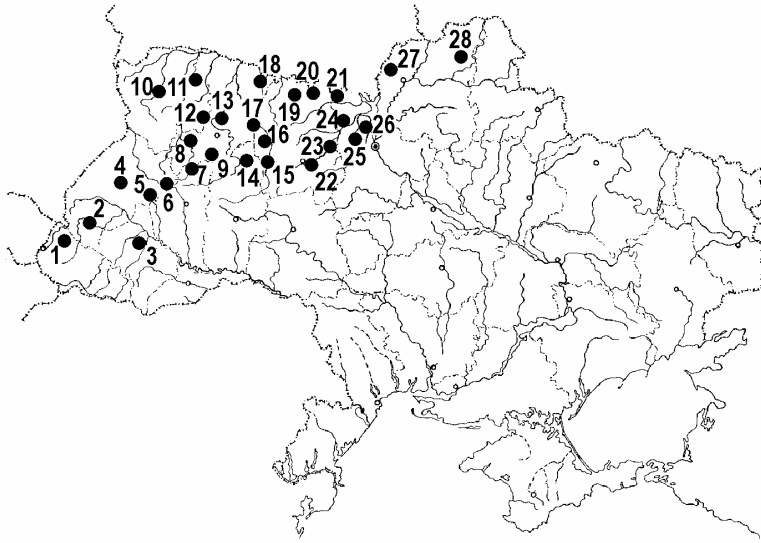


Fig. 11. Tilio-Carpinetum in Ukraine

Synonyms: *Aceri tatarici-Carpinetum betuli* Vorobyov et al. 2008; *Carici digitatae-Carpinetum* (Kramarets et al. 1992) Kramarets et V.Solomakha 1995 in V.Solomakha 1995; *Carpinetum-Nemoretum polessicum* Kleopow 1941; *Gentiano asclepiadeae-Carpinetum betuli* Vorobyov et al. 2008; *Hepatico nobilis-Carpinetum betuli* Vorobyov et al. 2008; *Majanthemo bifolii-Quercetum roboris* I.Solomakha et al. 2006; *Polygonato odorati-Carpinetum betuli* Vorobyov et al. 2008; *Pulmonario officinalis-Carpinetum betuli* Vorobyov et al. 2008.

Publications: Bukhalo 1962 (point 5, 15 rel.), I.Solomakha et al. 1996 (point 25, 27 rel. as *Asaro europei-Betuletum* Shevchuk et V.Solomakha 1996, *Galeobdolon lutei-Carpinetum* Shevchuk et al. 1996 p.p., *Carici pilosae-Carpinetum* Neuhausl et Neuhauslova 1964, *Majanthemo bifolii-Quercetum roboris* I.Solomakha et al. 2006); Gorelov 1997 (point 4, 14 rel. as *Carici pilosae-Carpinetum auct. non Neuhausl et Neuhauslova* 1964, *Carici digitatae-Carpinetum* (Kramarets et al. 1992) Kramarets et Solomakha 1995 in V.Solomakha 1995, *Tilio-Carpinetum Traczyk* 1962); Onyshchenko 2002 (point 7, 13 rel.); Biodiversity... 2003 (point 12, 21 rel.); Yuglichek & Onyshchenko 2003 (point 14, 35 rel.); Solomakha et al. 2004 (point 2, 9 rel.); Orlov & Yakushenko 2005 (point 22, 15 rel.); Vorobyov et al. 2008 (points 1, 51 rel. as *Pulmonario officinalis-Carpinetum betuli* Vorobyov et al. 2008; point 2, 16 rel. as *Gentiano asclepiadeae-Carpinetum betuli* Vorobyov et al. 2008; point 5, 15 rel. as *Aceri tatarici-Carpinetum betuli* Vorobyov et al. 2008).

Constant species: *Acer platanoides*, *Anemone nemorosa*, *Carpinus betulus*, *Corylus avellana*, *Lamium galeobdolon*, *Majanthemum bifolium*, *Quercus robur*, *Stellaria holostea*.

Dominants. *Acer platanoides* (4%), *Acer pseudoplatanus* (4%), *Betula pendula* (5%), *Carpinus betulus* (36%), *Fraxinus excelsior* (4%), *Pinus sylvestris* (3%), *Quercus robur* (26%), *Tilia cordata* (8%); *Corylus avellana* (4%); *Aegopodium podagraria* (4%), *Asarum europaeum* (2%), *Anemone nemorosa* (16%), *Carex pilosa* (4%), *Corydalis solida* (2%), *Lamium galeobdolon* (3%), *Stellaria holostea* (5%).

Relevés of the association are presented in Tables 44-46.

Distribution. Zonal association in western and northern Ukraine. The northeasternmost association of all. *Carpinion betuli*.

Variability. Differential species of subassociations are shown in Table 14.

Subass. Tilio-Carpinetum calamagrostietosum Traczyk 1962

On acidic soils (transition to *Quercetalia roboris*).

Subass. Tilio-Carpinetum typicum Traczyk 1962

Central subassociation.

Subass. Tilio-Carpinetum stachyetosum Traczyk 1962

On moderately rich soils of rather high humidity (transition to *Alnion incanae*).

Subass. Tilio-Carpinetum corydaletosum Traczyk 1962

On rich soils.

Table 14. Differential species of subassociations of the Tilio-Carpinetum

Association	calamagrostietosum	typicum	stachyetosum	corydaletosum
Number of relevés	19	53	25	24

Calamagrostis arundinacea	63	2		
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Association	calamagros-tietosum	typicum	stachyetosum	corydale-tosum
Melampyrum pratense	16	.	.	.
Orthilia secunda	32	.	.	.
Peucedanum oreoselinum	21	.	.	.
Pteridium aquilinum	63	2	8	.
Rubus saxatilis	42	.	4	.
Trientalis europaea	53	.	.	.
Vaccinium myrtillus	58	9	.	.
Festuca gigantea	.	.	68	8
Adoxa moschatellina	.	6	64	50
Anemone ranunculoides	.	4	24	88
Carex sylvatica	.	.	48	42
Ficaria verna	.	.	48	58
Corydalis solida	.	11	60	96
Stachys sylvatica	.	6	24	33
Glechoma hirsuta	.	4	4	25
Corydalis cava	.	.	.	83
Gagea lutea	.	.	4	50
Lamium maculatum	.	.	.	17

The geographical variant from the Carpathians and adjacent areas differs by considerable constancies of *Euphorbia amygdaloides*, *Fagus sylvatica*, *Rubus hirtus*.

Isopyro thalictroidis-Carpinetum Onyshchenko 1998

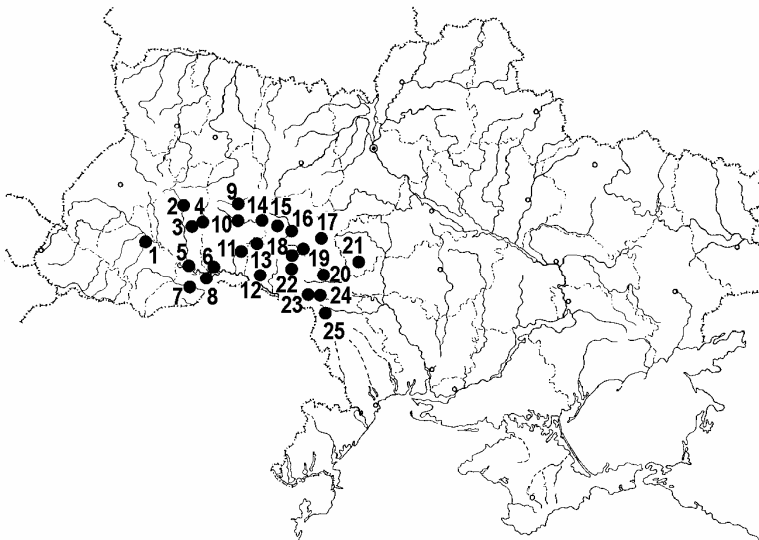


Fig. 12. *Isopyro thalictroidis*-Carpinetum in Ukraine

Synonyms: *Ajugo reptantis*-Carpinetum *betuli* Vorobyov et al. 2008; *Carici brevicollis*-Carpinetum *betuli* Vorobyov et al. 2008; *Polygonato latifolii*-Carpinetum Kramarets et al. 1992 (homonym); *Viburno lantanae*-Carpinetum *betuli* Vorobyov et al. 2008 p.p.

Publications: Onyshchenko 1998 (point 4 on Fig. 12, 30 rel., incl. nomenclatural type), Onyshchenko & Lukash 2004 (point 22, 21 rel.), Onyshchenko & Lubinska 2006 (point 6, 14 rel.), Yuglichek & Onyshchenko 2008 (point 10, 27 rel.), Vorobyov et al. 2008 (points 3, 5, 6, 10-19, 22, 24, ca. 232 rel., as *Ajugo reptantis*-Carpinetum *betuli* Vorobyov et al. 2008, *Carici brevicollis*-Carpinetum *betuli* Vorobyov et al. 2008; *Isopyro thalictroidis*-Carpinetum Onyshchenko 1998, *Viburno lantanae*-Carpinetum *betuli* Vorobyov et al. 2008).

Constant species: *Acer campestre*, *Acer platanoides*, *Aegopodium podagraria*, *Anemone ranunculoides*, *Asarum europaea*, *Carpinus betulus*, *Corydalis solida*, *Euonymus europaea*, *Ficaria verna*, *Fraxinus excelsior*, *Gagea lutea*, *Geum urbanum*, *Isopyrum thalictroides*, *Lamium galeobdolon*, *Polygonatum hirtum*, *Polygonatum multiflorum*, *Pulmonaria obscura*, *Quercus robur*, *Stellaria holostea*, *Tilia cordata*, *Ulmus glabra*, *Viola reichenbachiana*.

Dominants. *Acer campestre* (2%), *Acer platanoides* (5%), *Acer pseudoplatanus* (3%), *Carpinus betulus* (40%), *Fraxinus excelsior* (12%), *Quercus robur* (17%), *Tilia cordata* (6%); *Corylus avellana* (4%); *Aegopodium*

podagraria (8%), *Anemone nemorosa* (4%), *Anemone ranunculoides* (3%), *Asarum europaeum* (4%), *Carex pilosa* (7%), *Isopyrum thalictroides* (6%), *Lamium galeobdolon* (5%), *Stellaria holostea* (2%).

Relevés of the association are presented in Tables 47-52.

Distribution. Zonal community in the western part of the forest-steppe region and western upland areas of the deciduous region.

Nomenclatural type: rel. 1 in Table 48.

Variability. Differential species of subassociations are shown in Table 15.

Subass. Isopyro thalictroidis-Carpinetum caricetosum pilosae Onyshchenko 1998

On poorer and drier soils than subass. corydaletosum cavae. Nomenclatural type: rel. 1 in Table 47.

Subass. Isopyro thalictroidis-Carpinetum corydaletosum cavae Onyshchenko 1998

On rich soils. The most widespread subassociation. Nomenclatural type: rel. 1 in Table 48.

Subass. Isopyro thalictroidis-Carpinetum brachypodietosum sylvatici subass. nov.

Nomenclatural type: rel. 8 in Table 51.

On calcium-rich soils.

Table 15. Differential species of subassociations of the *Isopyro thalictroidis*-*Carpinetum*

Subassociation	caricetosum pilosae	corydaletosum cavae	brachypodietosum sylvatici
Number of relevés	21	84	8
<i>Carex pilosa</i>	100	20	25
<i>Platanthera chlorantha</i>	24	1	.
<i>Urtica dioica</i>	10	76	13
<i>Allium ursinum</i>	.	26	38
<i>Arum besserianum</i>	19	43	75
<i>Corydalis cava</i>	24	68	63
<i>Geranium phaeum</i>	.	31	25
<i>Brachypodium sylvaticum</i>	5	2	75
<i>Bromopsis benekenii</i>	19	.	63
<i>Carex muricata</i>	10	4	75
<i>Clematis recta</i>	.	.	50
<i>Cruciata glabra</i>	5	.	38
<i>Daphne mezereum</i>	10	6	38
<i>Hylotelephium polonicum</i> s.l.	.	.	25
<i>Laserpitium latifolium</i>	.	.	25
<i>Lathyrus niger</i>	10	.	75
<i>Lonicera xylosteum</i>	14	1	50
<i>Melampyrum nemorosum</i>	.	1	50
<i>Melica picta</i>	.	.	50
<i>Poa nemoralis</i>	19	4	100
<i>Pyrethrum corymbosum</i>	.	.	63
<i>Scutellaria altissima</i>	.	1	50
<i>Viburnum opulus</i>	.	5	50
<i>Vicia sepium</i>	24	.	75
<i>Vincetoxicum hirundinaria</i>	.	.	25
<i>Viola hirta</i>	.	.	25
<i>Acer tataricum</i>	24	.	25
<i>Campanula rapunculoides</i>	57	4	88
<i>Carex digitata</i>	19	1	50
<i>Convallaria majalis</i>	52	1	100
<i>Cornus mas</i>	24	.	25
<i>Dactylis glomerata</i>	43	5	63
<i>Melica nutans</i>	48	1	50
<i>Swida sanguinea</i>	57	14	88
<i>Viburnum lantana</i>	62	18	100

Galeobdolono lutei-Carpinetum Shevchyk et al. 1996 em. Onyshchenko et Sidenko 2002



Fig. 13. Galeobdolono lutei - Carpinetum in Ukraine

Synonyms: *Asaro europaei-Carpinetum* Vorobyov et al. 2008; *Carici michelii-Carpinetum* Vorobyov et al. 2008; *Carpinetum-Nemoretum ucrainicum* Kleopov 1941.

Publications: Shevchyk, Bakalyna & Solomakha 1996 (point 14 on Fig. 13, 7 rel., incl. nomenclatural type), Shevchyk, Solomakha & Voytyuk 1996 (point 14, 21 rel. as *Carici pilosae-Carpinetum* Neuhäusl et Neuhäuslová 1964, *Galeobdolono lutei-Carpinetum* Shevchyk et al. 1996, *Melampyro nemorosi-Carpinetum* Pass. 1957 subass. *tyicum* Shevchyk et al. 1996); Lyubchenko et al. 1997 (40 rel. as *Carici pilosae-Carpinetum* Neuhäusl et Neuhäuslová 1964, *Galeobdolono lutei-Carpinetum* Shevchyk et al. 1996, *Melampyro nemorosi-Carpinetum* Pass. 1957); Olefirenko 1997 (point 13, 25 rel. as *Stellario holostea-Aceretum platanoidis* Bajrak 1996, *Carici pilosae-Carpinetum betuli* Neuhäusl et Neuhäuslová 1964, *Melampyro nemorosi-Carpinetum betuli* Pass. 1957, *Galeobdolono lutei-Carpinetum betuli* Shevchyk et al. 1996); Onyshchenko & Sidenko 2002 (point 17, 10 rel. + transition to *Stellario holostea-Aceretum platanoidis*); Panchenko & Onyshchenko 2005 (point 2, 2 rel. + transition to *Stellario holostea-Aceretum*); Lukash & Onyshchenko 2006 (point 1, 28 rel., non-typical transitional to *Tilio-Carpinetum* variant); Vorobyov et al. 2008 (points 3-6, 7, 9, 13-15 ca. 278 rel., as *Galeobdolono lutei-Carpinetum* Shevchyk et al. 1996, *Asaro europaei-Carpinetum* Vorobyov et al. 2008, *Carici michelii-Carpinetum* Vorobyov et al. 2008).

Constant species: *Acer campestre*, *Acer platanoides*, *Aegopodium podagraria*, *Anemone ranunculoides*, *Asarum europaea*, *Carpinus betulus*, *Corydalis solida*, *Euonymus verrucosa*, *Ficaria verna*, *Lamium galeobdolon*, *Polygonatum multiflorum*, *Pulmonaria obscura*, *Quercus robur*, *Stellaria holostea*, *Tilia cordata*, *Ulmus glabra*.

Dominants. *Acer campestre* (4%), *Acer platanoides* (6%), *Carpinus betulus* (44%), *Fraxinus excelsior* (7%), *Quercus robur* (17%), *Tilia cordata* (7%), *Aegopodium podagraria* (5%), *Anemone ranunculoides* (3%), *Carex pilosa* (5%), *Corydalis cava* (3%), *Corydalis solida* (5%), *Ficaria verna* (3%), *Lamium galeobdolon* (3%), *Stellaria holostea* (7%).

Relevés of the association are presented in Tables 53-56.

Nomenclatural type. Author – Bakalyna L.V., date – 06.07.1995, tree layer – 0.9, shrub layer – 0.0, herb layer – 10%, location – Cherkasy Region, Kaniv District, Kanivsky Nature Reserve (zapovidnyk), sq. 13; species – *Carpinus betulus* 5, *Euonymus verrucosa* +, *Acer platanoides* +, *Quercus robur* 1, *Dryopteris filix-mas* 2, *Asarum europaeum* +, *Carex digitata* +, *Galium odoratum* +, *Galium aparine* +, *Geranium robertianum* +, *Impatiens noli-tangere* +, *Lamium galeobdolon* +, *Lathyrus vernus* +, *Mercurialis perennis* +, *Moehringia trinervia* +, *Polygonatum multiflorum*, *Pulmonaria obscura* +, *Stellaria holostea* +, *Viola odorata*. Publication: Shevchyk, Bakalyna & Solomakha 1996.

Syntaxonomical notes. The name “*Galeobdoloni lutei-Carpinetum* Shevchyk et al. 1996” was published for the first time for anthropically modified hornbeam forests of Kanivsky Nature Reserve. Nomenclatural type represents this variant of the association. V. Onyshchenko and V. Sidenko (2002) included into this association the natural forests of the Dnipro forest-steppe region.

Distribution. Zonal association in the central part of the forest-steppe region of Ukraine.

Variability. Differential species of subassociations are shown in Table 16.

Subass. Galeobdolono lutei-Carpinetum betuletosum pendulae Shevchyk et al. 1996

Synonyms: *Galeobdolono lutei-Carpinetum caricetosum pilosae* Onyshchenko et Sidenko 2002 subass. prov. Nomenclatural type: rel. 19 in Table 53.

On poorer soils than subass. sambucetosum nigrae.

Subass. Galeobdolono lutei-Carpinetum sambucetosum nigrae Shevchyk et al. 1996

Synonyms: Galeobdolono lutei-Carpinetum urticetosum dioicae Onyshchenko et Sidenko 2002 subass. prov.,

Galeobdolono lutei-Carpinetum stachyetosum sylvaticae Vorobyov et al. 2008.

Nomenclatural type: rel. 28 in Table 55.

On solil rich in nitrates].

Subass. Galeobdolono lutei-Carpinetum melampyretosum nemorosi Vorobyov et al. 2008

Synonyms and alternative names: Carici michelii-Carpinetum Vorobyov et al. 2008, Galeobdolono lutei-

Carpinetum poetosum nemoralis Onyshchenko et Sidenko 2002 subass. prov.

Nomenclatural type: rel. 20 in Table 56.

On rather dry soils. Transitional to ord. Quercetalia pubescentis.

Table 16. Differential species of subassociations of the Galeobdolono lutei-Carpinetum

Subassociation	betuletosum pendulae	sambucetosum nigrae	melampyretosum nemorosi
Number of relevés	46	32	19
Majanthemum bifolium	47	.	5
Carex digitata	24	.	74
Carex pilosa	73	13	74
Convallaria majalis	51	.	79
Melica nutans	25	.	53
Sorbus aucuparia	17	.	26
Viola mirabilis	60	3	68
Ficaria verna	55	72	.
Alliaria petiolata	11	55	5
Omphalodes scorpioides	.	23	.
Lamium maculatum	5	50	16
Sambucus nigra	11	60	.
Campanula rapunculoides	8	7	53
Carex spicata	.	7	26
Carex michelii	.	.	53
Cystopteris fragilis	8	3	47
Dactylis glomerata	17	2	74
Euphorbia cyparissias	.	.	32
Fragaria vesca	1	.	26
Hylotelephium polonicum s.l.	3	3	37
Lathyrus niger	12	3	63
Melampyrum nemorosum	.	.	42
Poa nemoralis	16	10	100
Rosa canina	.	.	26
Rosa corymbifera	.	.	26
Scutallaria altissima	3	10	42
Silene nutans	.	.	26
Solidago virgaurea	3	.	37
Viola hirta	5	7	58
Acer tataricum	5	10	53
Astragalus glycyphyllos	5	.	32
Campanula persicifolia	3	.	58

Com. *Acer platanoides*-*Tilia cordata* Jutrzenka-Trzebiatowski 1993

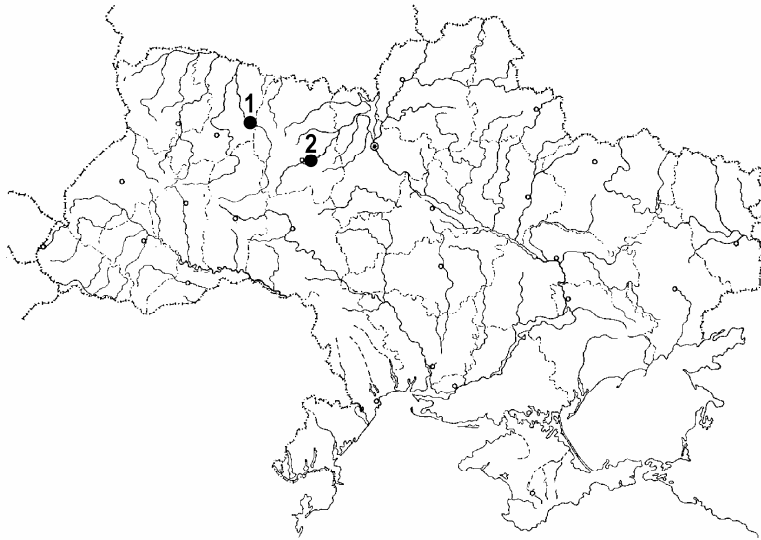


Fig. 14. Com. *Acer platanoides*-*Tilia cordata* in Ukraine

Synonym: *Poo nemoralis*-*Tilietum cordatae* Yakushenko 2004 (homonym, no nomenclatural type).

Publications: Yakushenko 2004 (point 1 on Fig. 14, 1 rel.; point 2, 7 rel.; as *Poo nemoralis*-*Tilietum cordatae* Yakushenko 2004), Orlov & Yakushenko 2005 (point 2, as *Poo nemoralis*-*Tilietum cordatae* Yakushenko 2004).

Constant species: *Acer platanoides*, *Acer tataricum*, *Asarum europaeum*, *Carex digitata*, *Corylus avellana*, *Dryopteris filix-mas*, *Euonymus verrucosa*, *Lamium maculatum*, *Lathyrus vernus*, *Melica nutans*, *Poa nemoralis*, *Quercus robur*, *Stellaria holostea*, *Tilia cordata*.

Dominants. *Acer platanoides*, *Tilia cordata*; *Acer tataricum*, *Corylus avellana*, *Euonymus verrucosa*; *Asarum europaeum*, *Dryopteris filix-mas*, *Poa nemoralis*, *Stellaria holostea*.

Relevés are presented in Table 57.

Distribution. Rare community of steep (30-50°) stony (granite) slopes of river valleys in Zhytomyr Polissia.

Syntaxonomical notes. The position of this community is unclear. It differs from most associations of *Tilio-Acerion* by the absence of central European species. Ukrainian relevés differ from Polish relevés of com. *Acer platanoides* – *Tilia cordata* by a high constancy of *Acer tataricum*.

3.6. *Quercus roboris*-*Tilia cordatae*

All. *Quercus roboris*-*Tilia cordatae cordatae* Solomeshch et Laivinsh 1993 ex Bulokhov et Solomeshch 2003 includes mesic eastern European forests of the deciduous forest region and the southern part of the coniferous forests region. Main dominants of the tree layer are *Quercus robur* and *Tilia cordata*. In Ukraine, the alliance is represented by the *Mercurialo perennis*-*Quercetum roboris*.

Mercurialo perennis-*Quercetum roboris* Bulokhov et Solomeshch 2003



Fig. 15. *Mercurialo-Quercetum roboris* in Ukraine

Synonyms: *Aceri campestris*-*Tilietum cordatae* Zaugolnova et Braslavskaya 2003, *Aceri campestris*-*Quercetum* Bulokhov et Solomeshch 2003, *Carici pilosae*-*Quercetum roboris* Bulokhov et Solomeshch 1991.

Publications: Panchenko & Onyshchenko 2003 (point 1 on Fig. 15, 22 rel.).

Constant species: *Acer platanoides*, *Aegopodium podagraria*, *Carex pilosa*, *Convallaria majalis*, *Corylus avellana*, *Dryopteris carthusiana*, *Majanthemum bifolium*, *Padus avium*, *Quercus robur*, *Rubus saxatilis*, *Stellaria holostea*, *Tilia cordata*.

Dominants. *Acer platanoides* (8%), *Betula pendula* (10%), *Pinus sylvestris* (3%), *Populus tremula* (3%), *Quercus robur* (46%), *Tilia cordata* (12%); *Corylus avellana* (22%), *Padus avium* (2%); *Aegopodium podagraria* (3%), *Anemone ranunculoides* (4%), *Carex pilosa* (14%), *Convallaria majalis* (3%), *Corydalis cava* (4%), *Stellaria holostea* (6%).

Relevés of the association are presented in Table 58.

Distribution. Zonal association in the deciduous forests geobotanical region of eastern Europe.

Variability. Differential species of subassociations are shown in Table 17.

Subass. *Mercurialo perennis-Quercetum roboris calamagrostietosum arundinaceae* subass. nov.

Nomenclatural type: rel. 4 in Table 58.

On rather poor acidic soils, transition to *Quercetalia roboris*.

Subass. *Mercurialo perennis-Quercetum roboris typicum* subass. nov. prov.

Central subassociation.

Subass. *Mercurialo perennis-Quercetum roboris corydaletosum cavae* subass. nov. prov.

On rich soils.

Table 17. Differential species of subassociations of the *Mercurialo perennis-Quercetum roboris*

Subassociation	<i>calamagrostietosum arundinaceae</i>	<i>typicum</i>	<i>corydaletosum cavae</i>
Number of relevés	22	3	6
<i>Calamagrostis arundinacea</i>	71	.	.
<i>Orthilia secunda</i>	29	.	.
<i>Pteridium aquilinum</i>	57	20	.

Subassociation	calamagrostietosum arundinaceae	typicum	corydaletosum cavae
<i>Solidago virgaurea</i>	43	.	.
<i>Trientalis europaea</i>	71	.	30
<i>Vaccinium myrtillus</i>	14	.	.
<i>Carex digitata</i>	71	40	.
<i>Viburnum opulus</i>	43	20	.
<i>Glechoma hirsuta</i>	14	80	80
<i>Pulmonaria obscura</i>	14	60	70
<i>Anemone ranunculoides</i>	14	60	100
<i>Corydalis solida</i>	.	20	40
<i>Ficaria verna</i>	.	40	70
<i>Corydalis cava</i>	.	.	90
<i>Gagea lutea</i>	.	.	80
<i>Lathraea squamaria</i>	.	.	30
<i>Urtica dioica</i>	.	.	80

3.7. Scillo sibericae-Quercion roboris

All. Scillo sibericae-Quercion roboris all. nov. includes mesic eastern European oak, ash, maple and lime forests of the forest-steppe and steppe regions. In Ukraine, it includes two associations: Stellario holosteae-Aceretum platanoidis Bajrak 1996 and Tulipo quercetorum-Quercetum roboris (Onyshchenko et al. 2007) ass. nov. Constancies of differential species of these associations are shown in Table 18. Nomenclatural type: Stellario holosteae-Aceretum platanoidis Bajrak 1996.

Table 18. Differential species of associations of all. Scillo sibericae-Quercion roboris

Association	Stellario holosteae- Aceretum	Tulipo quercetorum- Quercetum
Number of relevés	63	13
<i>Acer platanoides</i>	90	8
<i>Aegopodium podagraria</i>	55	.
<i>Asarum europaeum</i>	73	.
<i>Carex pilosa</i>	31	.
<i>Convallaria majalis</i>	34	8
<i>Corylus avellana</i>	54	.
<i>Dentaria quinquefolia</i>	50	.
<i>Glechoma hirsuta</i>	40	8
<i>Mercurialis perennis</i>	27	.
<i>Pulmonaria obscura</i>	81	8
<i>Swida sanguinea</i>	42	.
<i>Ulmus laevis</i>	19	.
<i>Viola mirabilis</i>	44	.
<i>Ballota nigra</i>	.	31
<i>Chaerophyllum temulum</i>	14	54
<i>Cynoglossum officinale</i>	.	23
<i>Dactylis glomerata</i>	13	69
<i>Festuca gigantea</i>	2	38
<i>Geum urbanum</i>	37	92
<i>Lapsana communis</i>	6	46
<i>Leonurus villosus</i>	.	38
<i>Scutellaria altissima</i>	5	31
<i>Torilis japonica</i>	.	54
<i>Tulipa quercetorum</i>	30	100
<i>Vincetoxicum scandens</i>	2	23

Stellario holosteaе-Aceretum platanoidis Bajrak 1996 em. Onyshchenko et Sidenko 2002

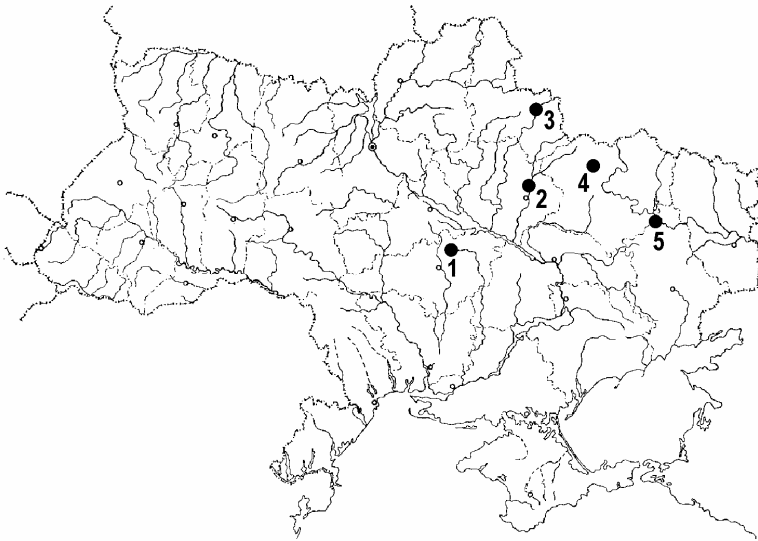


Fig. 16. *Stellario holosteaе-Aceretum platanoidis* in Ukraine

Synonyms: *Mixto-Nemoretum tanaiticum* Kleopov 1941, *Mercurialo perennis-Fraxinetum excelsioris* Bajrak 1996, *Lamio maculati-Quercetum roboris* Bulokhov 1989 ex Goncharenko 2001.

Publications: Bajrak 1996 (20 rel., as *Mercuriali perennis-Fraxinetum excelsiori* Bajrak 1996 and *Stellario holosteaе-Aceretum platanoidis* Bajrak 1996), Goncharenko 2001 (point 3 on Fig. 16, the same relevés as in Goncharenko 2003), Onyshchenko & Sidenko 2002 (point 1, 7 rel. + transition to *Galeobdolo lutei-Carpinetum*), Goncharenko 2003 (point 3, 13 rel. as *Lamio maculati-Quercetum roboris* Bulokhov ex Goncharenko 2001, 6 rel. as *Stellario holosteaе-Aceretum platanoidis* Bajrak 1996 em. Goncharenko 2001), Onyshchenko et al. 2007 (point 5, 29 rel.).

Constant species: *Acer campestre*, *Acer platanoides*, *Aegopodium podagraria*, *Anemone ranunculoides*, *Asarum europaeum*, *Corydalis solida*, *Euonymus europaea*, *Ficaria verna*, *Fraxinus excelsior*, *Lathyrus vernus*, *Polygonatum multiflorum*, *Pulmonaria obscura*, *Quercus robur*, *Scilla sibirica*, *Stellaria holostea*, *Tilia cordata*.

Dominants. *Acer campestre* (18%), *Acer platanoides* (15%), *Carpinus betulus* (3%), *Fraxinus excelsior* (21%), *Quercus robur* (29%), *Tilia cordata* (14%); *Corylus avellana* (3%), *Euonymus verrucosa* (2%); *Aegopodium podagraria* (7%), *Anemone ranunculoides* (8%), *Carex pilosa* (4%), *Corydalis solida* (3%), *Dentaria quinquefolia* (2%), *Ficaria verna* (3%), *Scilla sibirica* (2%), *Stellaria holostea* (3%).

Relevés of the association are presented in Tables 59-60.

Nomenclatural type. Author – O.Yu. Nedorub, date – 29.06.1994 + spring, tree layer – 0.6, herb layer – 60, location – Poltava Region, Dykanka District, Dykansky forest, sq.66. Species – *Acer campestre* 1, *Acer platanoides* 2, *Adoxa moschatellina* 1, *Aegopodium podagraria* +, *Anemone ranunculoides* 2, *Asarum europaeum* 2, *Carex pilosa* +, *Corydalis solida* 2, *Euonymus europaea* +, *Ficaria verna* 2, *Galium aparine* 1, *Geum urbanum* +, *Polygonatum multiflorum* +, *Populus tremula* 2, *Pulmonaria obscura* +, *Quercus robur* 3, *Scilla sibirica* 2, *Stellaria holostea* 4, *Tilia cordata* 2, *Viola mirabilis* +. Publication: Bajrak 1996 (tab.2, rel. 17).

Syntaxonomical notes. This association was published for the first time (Bajrak 1996) together with a simialar association *Mercurialo-Fraxinetum* Bajrak 1996. The latter name is a homonym. Onyshchenko and Sidenko (2002) included *Mercurialo-Fraxinetum* Bajrak 1996 in *Stellario holosteaе-Aceretum platanoidis* Bajrak 1996.

Distribution. Zonal association in the eastern part of the forest-steppe region of Ukraine. It occurs in the forest-steppe region and the northeastern part of the steppe region.

Variability. In relevés from the southeastern part of the range of this association in Ukraine there are high constancies of *Tulipa quercetorum* and *Melica picta*. Relevés from the northwestern part of the area differ by higher constancies of *Paris quadrifolia*, *Populus tremula*, *Sorbus aucuparia* and lower constancies of *Dentaria quinquefolia*, *Scilla sibirica*, and *Viola odorata*. Differential species of subassociations are shown in Table 19.

Subass. *Stellario holosteaе-Aceretum platanoidis caricetosum pilosae* subass. nov.

Nomenclatural type: rel. 22 in Table 59.

On poorer soils than subass. *lamietosum maculati*.

Subass. *Stellario holosteaе-Aceretum platanoidis parietosum quadrifoliae* Bajrak 1996

Nomenclatural type: rel. 17 in Table 60.

On rich soils.

Table 19. Differential species of subassociations of the *Stellario holostea*-*Aceretum platanoidis*

Subassociation	caricetosum pilosae	parietosum quadrifoliae
Number of relevés	30	22
<i>Carex pilosa</i>	53	9
<i>Dactylis glomerata</i>	27	.
<i>Euonymus verrucosa</i>	80	23
<i>Melica picta</i>	53	5
<i>Poa nemoralis</i>	37	5
<i>Viola mirabilis</i>	70	18
<i>Alliaria petiolata</i>	7	41
<i>Chaerophyllum temulum</i>	.	27
<i>Lamium maculatum</i>	.	50
<i>Populus tremula</i>	.	18
<i>Sambucus nigra</i>	.	18
<i>Stachys sylvatica</i>	.	14
<i>Urtica dioica</i>	.	68

***Tulipo quercetorum*-*Quercetum roboris* ass. nov.**

Fig. 17. *Tulipo quercetorum*-*Quercetum roboris* in Ukraine

Publications: Onyshchenko et al. 2007 (point 1 on Fig. 17, 2 rel.).

Constant species: *Acer campestre*, *Alliaria petiolata*, *Anemone ranunculoides*, *Corydalis marschalliana*, *Corydalis solida*, *Crataegus curvisepala*, *Dactylis glomerata*, *Euonymus europaea*, *Fraxinus excelsior*, *Geum urbanum*, *Polygonatum multiflorum*, *Quercus robur*, *Scilla siberica*, *Stellaria holostea*, *Tulipa quercetorum*.

Dominants. *Acer campestre* (21%), *Fraxinus excelsior* (36%), *Quercus robur* (36%), *Ulmus minor* (2%); *Anemone ranunculoides* (3%), *Corydalis marschalliana* (2%), *Corydalis solida* (8%), *Ficaria verna* (3%), *Scilla siberica* (3%), *Stellaria holostea* (3%), *Tulipa quercetorum* (4%).

Relevés of the association are presented in Table 61.

Nomenclatural type: rel. 11 in Table 61.

Distribution. Association of the steppe region, mainly east of the Dnipro.

Syntaxonomical notes. It is a transitional plant community from ord. *Fagetalia sylvaticae* to ord. *Quercetalia pubescentis* (all. *Aceri tatarici*-*Quercion Zolyomi* 1957). Besides the *Tulipo quercetorum*-*Quercetum roboris* there are similar forests with *Tulipa quercetorum* and light-requiring species (*Aceri tatarici*-*Quercion*) in the steppe region.

3.8. Paeonio dauricae-Quercion petraeae

All. Paeonio dauricae-Quercion petraeae Didukh 1996 sylvaticae includes 4 associations: Ranunculo constantinopolitani-Fraxinetum Didukh 1996, Bromopsis benekenii-Carpinetum Didukh 1996, Lasero trilobi-Carpinetum Didukh 1996, and Fago-Aceretum stevenii Borhidi 1962. Differential species of the associations are shown in Table 20.

Table 20. Differential species of associations of all. Paeonio dauricae-Quercion petraeae Didukh 1996

Association	Lasero trilobi-Carpinetum	Ranunculo constantinopolitani-Fraxinetum	Bromopsis benekenii-Carpinetum	Fago-Aceretum stevenii
Number of relevés	24	13	44	5
Lasero trilobum	38	.	2	20
Polygonatum hirtum	54	7	9	.
Scilla siberica	78	20	.	.
Sorbus torminalis	54	7	.	.
Galium aparine	17	53	5	20
Ranunculus constantinopolitanus	13	87	11	40
Smyrnium perfoliatum	4	80	12	.
Brachypodium sylvaticum	8	7	40	.
Bromopsis benekenii	25	7	58	20
Campanula trachelium	8	.	21	.
Carex sylvatica	.	.	26	.
Cephalanthera longifolia	4	.	26	.
Chaerophyllum temulum	.	.	19	.
Convallaria majalis	13	.	44	.
Fragaria vesca	8	8	35	.
Iberis saxatilis	.	.	40	.
Lathraea squamaria	.	.	27	.
Melica nutans	.	.	19	.
Milium effusum	13	13	42	.
Poa sterilis	.	.	38	.
Tilia cordata	.	.	25	.
Acer stevenii	8	.	12	100
Alliaria petiolata	.	13	7	40
Corylus avellana	25	7	39	.
Epipactis helleborine	33	.	19	.
Euonymus europaea	46	7	28	.
Euphorbia amygdaloides	67	.	58	20
Lathyrus niger	42	.	14	.
Lathyrus aureus	71	13	42	.
Neottia nidus-avis	33	.	23	.
Vincetoxicum scandens	83	.	45	20
Viola dehnhardtii	75	13	25	.
Aegonychon purpureocaeruleum	26	47	5	.
Lathyrus rotundifolius	38	33	.	.
Corydalis paczoskii (Corydalis solida s.l.)	11	40	33	.
Polygonatum multiflorum	4	47	59	.
Sambucus nigra	.	20	16	.
Acer campestre	88	93	63	.
Cornus mas	88	60	56	20
Euonymus verrucosa	67	40	23	.
Hedera helix	49	47	61	.
Quercus petraea	88	87	35	20
Dactylis glomerata	4	.	58	40
Dryopteris filix-mas	.	.	30	80

Association	Lasero trilobi-Carpinetum	Ranunculo constantinopolitani-Fraxinetum	Bromopsio benekenii-Carpinetum	Fago-Aceretum stevenii
<i>Urtica dioica</i>	.	.	19	20
<i>Fagus sylvatica</i>	38	.	86	60
<i>Galium odoratum</i>	33	.	79	80

Ranunculo constantinopolitani-Fraxinetum Didukh 1996



Fig. 18. *Ranunculo constantinopolitani-Fraxinetum* in Ukraine

Synonyms: *Polygonato multiflori-Quercetum petraeae* Didukh 1996.

Publications: Didukh 1996 (10 rel. as *Ranunculo constantinopolitani-Fraxinetum* Didukh 1996, *Polygonato multiflori-Quercetum petraeae* Didukh 1996; incl. nomenclatural type).

Constant species: *Acer campestre*, *Arum elongatum*, *Carpinus betulus*, *Cornus mas*, *Fraxinus excelsior*, *Galanthus plicatus*, *Galium aparine*, *Mercurialis perennis*, *Physospermum cornubiense*, *Quercus petraea*, *Ranunculus constantinopolitanus*, *Scilla bifolia*, *Smyrniium perfoliatum*, *Vincetoxicum scandens*, *Viola dehnhardtii*.

Dominants. *Acer campestre* (5%), *Carpinus betulus* (13%), *Fraxinus excelsior* (35%), *Quercus petraea* (34%); *Cornus mas* (8%); *Dentaria quinquefolia* (2%), *Galanthus plicatus* (4%), *Mercurialis perennis* (28%), *Ranunculus constantinopolitanus* (13%).

Relevés of the association are presented in Table 62.

Nomenclatural type: rel. 8 in Table 62.

Distribution. The Crimean Mountains. Nitrophilous broadleaved forests at altitudes 300-800 m a.s.l..

Syntaxonomical notes. Ya.P. Didukh distinguishes two associations of Crimean nitrophilous forests: *Ranunculo constantinopolitani-Fraxinetum excelsioris* Didukh 1996 and *Polygonato multiflori-Quercetum petraeae* Didukh 1996. The *Polygonato multiflori-Quercetum petraeae* differs by dominance of *Quercus petraea*. Its differential species are *Polygonatum multiflorum* and *Galium verum*.

Bromopsio benekenii-Carpinetum Didukh 1996



Fig. 19. Bromopsio benekenii-Carpinetum

Synonyms: Euphorbio amygdaloidis-Carpinetum betuli Vorobyov et al. 2008, Hedero tauricae-Carpinetum betuli Vorobyov et al. 2008.

Publications: Didukh 1996 (5 rel., incl. nomenclatural type), Vorobyov et al. 2008 (10 rel. as Euphorbio amygdaloidis-Carpinetum betuli Vorobyov et al. 2008, 23 rel. as Hedero tauricae-Carpinetum betuli Vorobyov et al. 2008).

Constant species: *Arum elongatum*, *Bromopsis benekenii*, *Carpinus betulus*, *Dentaria quinquefolia*, *Fagus sylvatica* ssp. *moesiaca*, *Fraxinus excelsior*, *Galanthus plicatus*, *Galium odoratum*, *Geum urbanum*, *Lathyrus aureus*, *Mercurialis perennis*, *Milium effusum*, *Neottia nidus-avis*, *Poa nemoralis*, *Primula vulgaris*, *Scilla bifolia*, *Viola dehnhardtii*.

Dominants. *Acer campestre* (6%), *Acer stevenii* (3%), *Carpinus betulus* (53%), *Fagus sylvatica* ssp. *moesiaca* (4%), *Fraxinus excelsior* (3%), *Quercus petraea* (7%); *Corylus avellana* (6%); *Dentaria quinquefolia* (4%), *Hedera helix* (4%), *Mercurialis perennis* (5%).

Relevés of the association are presented in Table 63.

Distribution. The Crimean Mountains. At altitudes 500-900 m a.s.l..

Nomenclatural type. Author – Ya.P. Didukh, date – 10.06.1977, tree layer – 1.0, herb layer – 35%, location – Crimea, Bilohirsk District, near villages Zemlianychno and Opytne, 640 m over the sea level; Species – *Allium cyrillii*, *Bromopsis benekenii* +, *Carex digitata* +, *Carpinus betulus* – 5, *Cephalanthera longifolia* +, *Dentaria quinquefolia* +, *Dictamnus gymnostylis* +, *Euonymus europaea* +, *Euphorbia amygdaloides* +, *Fagus sylvatica* +, *Fraxinus excelsior* +, *Galium odoratum* +, *Geum urbanum* +, *Hedera taurica* 4, *Lathyrus aureus* +, *Mercurialis perennis* +, *Milium effusum* +, *Neottia nidus-avis* +, *Poa nemoralis* +, *Polygonatum hirtum* +, *Polygonatum odoratum* 1, *Tamus communis* +, *Tilia begoniifolia* +, *Viola hirta* +, *Viola odorata* +. Publication: Didukh 1996 (tab. 3, rel. 32).

Variability.

Var. typicum

No differential species.

Var. *Salvia glutinosa*

D.s.: *Campanula trachelium*, *Chaerophyllum temulum*, *Mycelis muralis*, *Salvia glutinosa*, *Sambucus nigra*, *Viburnum opulus*.

On terraces of rivers.

Var. *Lathyrus laxiflorus*

D.s.: *Lathyrus laxiflorus*, *Luzula forsteri*, *Veronica umbrosa*.

Lasero trilobi-Carpinetum Didukh 1996 emend.



Fig. 20. Lasero trilobi-Carpinetum in Ukraine

Synonyms: Vincetoxico scandentis-Fraxinetum Didukh 1996, Corno maris-Quercetum petraeae Didukh 1996.

Publications: Didukh 1996 (15 rel. as Lasero trilobi-Carpinetum Didukh 1996, Vincetoxico scandentis-Fraxinetum Didukh 1996, Corno maris-Quercetum petraeae Didukh 1996; incl. nomenclatural type).

Constant species: *Acer campestre*, *Carpinus betulus*, *Cornus mas*, *Crocus tauricus*, *Dentaria quinquefolia*, *Euonymus verrucosa*, *Euphorbia amygdaloides*, *Fraxinus excelsior*, *Lathyrus aureus*, *Mercurialis perennis*, *Paeonia daurica*, *Physospermum cornubiense*, *Primula acaulis*, *Quercus petraea*, *Scilla bifolia*, *Scilla siberica*, *Vincetoxicum scandens*, *Viola dehnhardtii*.

Dominants. *Acer campestre* (9%), *Carpinus betulus* (24%), *Fraxinus excelsior* (17%), *Quercus petraea* (39%); *Cornus mas* (4%), *Corylus avellana* (7%); *Dentaria quinquefolia* (3%), *Galium odoratum* (3%), *Hedera helix* (3%), *Lathyrus aureus* (5%), *Mercurialis perennis* (13%), *Physospermum cornubiense* (3%), *Polygonatum odoratum* (3%), *Scilla siberica* (2%).

Relevés of the association are presented in Table 64.

Nomenclatural type: rel. 10 in Table 64.

Distribution. The Crimean Mountains. The main association of the *Quercus petraea* forests belt (300-600 m).

Syntaxonomical notes. Ya.P. Didukh distinguishes three associations of similar species composition: Vincetoxico scandentis-Fraxinetum Didukh 1996, Corno maris-Quercetum petraeae Didukh 1996, Lasero trilobi-Carpinetum Didukh 1996 (two first associations were classified in all. Paeonio dauricae-Quercion petraeae Didukh 1996 of ord. Querco-Carpinetalia betuli (Oberd.) Fuk. 1968, the third one was referred to all. Dentario quinquefoliae-Fagion sylvaticae Didukh 1996 of ord. Dentario-Fagetalia (Horv. 1963) Fuk. 1969).

Fago-Aceretum stevenii Borhidi 1962 nom. invers. propos.



Fig. 21. Fago-Aceretum stevenii in Ukraine

Publications: Didukh 1996 (5 rel.).

Constant species: *Acer stevenii*, *Carpinus betulus*, *Corydalis marschalliana*, *Dentaria quinquefolia*, *Dryopteris filix-mas*, *Fraxinus excelsior*, *Galium odoratum*, *Mercurialis perennis*.

Dominants. *Acer stevenii*, *Carpinus betulus*, *Fagus sylvatica* ssp. *moesiaca*; *Cornus mas*; *Dentaria quinquefolia*, *Dryopteris filix-mas*, *Galanthus plicatus*, *Mercurialis perennis*, *Physospermum cornubiense*.

Relevés of the association are presented in Table 65.

Distribution. The Crimean Mountains. Stony soils, including screes, at altitudes 700-1200 m.

3.9. *Tilio platyphylli-Acerion pseudoplatani*

All. *Tilio platyphylli-Acerion pseudoplatani* Klika 1955 comprises central European broadleaved (ash, maple, lime, elm) forests on stony soils (usually on steep slopes and in ravines). In Ukraine, it includes 4 associations: *Arunco-Aceretum Moor* 1952 s.l., *Phyllitidi-Aceretum Moor* 1952, *Aceri platanoidis-Fraxinetum Onyshchenko* 1998 and *Anthriscus nitidi-Aceretum pseudoplatani Ralo et Onyshchenko* 2008. Constancies of differential species of these associations are shown in Table 21.

Table 21. Differential species of associations of all. *Tilio platyphylli-Acerion pseudoplatani*

Association	Arunco-Aceretum s.l.	Aceri platanoidis-Fraxinetum	Phyllitido-Aceretum	Anthriscus nitidi-Aceretum pseudoplatani
Number of relevés	3	25	3	22
<i>Alnus incana</i>	33	.	.	.
<i>Cicerbita alpina</i>	33	.	.	.
<i>Euphorbia amygdaloides</i>	33	.	.	.
<i>Filipendula ulmaria</i>	67	.	.	.
<i>Gentiana asclepiadea</i>	33	.	.	.
<i>Polygonatum verticillatum</i>	33	.	.	.
<i>Senecio ovatus</i>	67	.	.	8
<i>Veratrum album</i> s.l.	33	.	.	.
<i>Glechoma hirsuta</i>	67	46	.	17
<i>Acer campestre</i>	.	54	.	13
<i>Bromopsis benekenii</i>	.	22	.	.
<i>Chaerophyllum temulum</i>	.	38	.	4
<i>Chelidonium majus</i>	.	69	.	.
<i>Fallopia dumetorum</i>	.	35	.	.
<i>Galium aparine</i>	.	78	.	25
<i>Hordelymus europaeus</i>	.	29	.	4
<i>Omphalodes scorpioides</i>	.	21	.	.
<i>Polygonatum hirtum</i>	.	71	.	13
<i>Scilla bifolia</i>	.	26	.	.
<i>Scutellaria altissima</i>	.	65	.	.
<i>Hylotelephium polonicum</i>	.	39	.	4
<i>Viburnum lantana</i>	.	47	.	.
<i>Viola odorata</i>	.	89	.	.
<i>Convallaria majalis</i>	.	62	33	4
<i>Asplenium trichomanes</i>	.	20	100	.
<i>Cystopteris fragilis</i>	.	23	100	4
<i>Phyllitis scolopendrium</i>	.	.	100	.
<i>Polypodium vulgare</i>	.	8	100	.
<i>Polystichum aculeatum</i>	.	.	100	17
<i>Anemone nemorosa</i>	33	3	100	92
<i>Dentaria glandulosa</i>	.	7	100	71
<i>Dryopteris dilatata</i>	.	.	33	29
<i>Glechoma hederacea</i>	.	.	33	58
<i>Ranunculus lanuginosus</i>	.	.	33	75
<i>Hepatica nobilis</i>	.	.	33	42
<i>Ajuga reptans</i>	.	3	.	83
<i>Anthriscus nitida</i>	.	10	.	96
<i>Aposeris foetida</i>	.	.	.	46
<i>Campanula latifolia</i>	.	.	.	46
<i>Carex sylvatica</i>	33	.	.	83
<i>Cerastium sylvaticum</i>	.	.	.	58

Association	Arunco- Aceretum s.l.	Aceri platanoidis- Fraxinetum	Phyllitido- Aceretum	Anthrisko nitidi-Aceretum pseudoplatani
Chaerophyllum aromaticum	.	4	.	67
Chrysosplenium alternifolium	.	12	.	71
Circaea lutetiana	.	.	.	63
Dipsacus pilosus	.	.	.	21
Equisetum arvense	.	.	.	25
Festuca gigantea	.	.	.	63
Ficaria verna	?	28	.	96
Galeopsis speciosa	.	.	.	38
Lathraea squamaria	?	.	.	33
Lathyrus vernus	.	6	.	50
Lysimachia nummularia	.	.	.	54
Moehringia trinervia	.	9	.	54
Myosoton aquaticum	.	.	.	25
Padus avium	.	.	.	29
Primula elatior	.	.	.	42
Rumex obtusifolius ssp. sylvestris	.	.	.	29
Salix caprea	.	.	.	25
Sanicula europaea	.	12	.	50
Scrophularia nodosa	.	4	.	42
Stachys sylvatica	.	16	.	88
Viola reichenbachiana	.	6	.	71
Aruncus dioicus	33	.	.	21
Impatiens noli-tangere	67	.	.	88
Majanthemum bifolium	33	.	.	46
Milium effusum	100	21	.	67
Picea abies	33	.	.	29
Rubus idaeus	33	.	.	25
Stellaria nemorum	67	.	.	75
Abies alba	100	.	33	.
Hylotelephium argutum	33	.	33	.
Polystichum braunii	67	.	33	4
Symphytum cordatum	67	.	67	.
Corylus avellana	.	91	.	67
Euonymus europaea	.	60	.	79
Euonymus verrucosa	.	72	.	54
Fraxinus excelsior	33	100	.	100
Geum urbanum	.	64	.	83
Lapsana communis	.	25	.	32
Melandrium dioicum	.	62	.	68
Poa nemoralis	.	33	.	46
Polygonatum multiflorum	.	88	.	92
Ranunculus cassubicus	.	19	.	63
Swida sanquinea	.	44	.	44
Tilia cordata	.	41	.	88
Viola mirabilis	.	41	.	46
Dryopteris carthusiana	33	.	33	63
Oxalis acetosella	67	.	33	88
Rubus hirtus	67	.	33	46

Arunco-Aceretum Moor 1952 s. l.



Fig. 22. Arunco-Aceretum s.l. in Ukraine

Synonyms: Lunario-Aceretum Grüneberg et Schült. 1957, Mercuriali-Fraxinetum (Klika 1942) Husová 1982.

Publications: Solomakha et al. 2004 (point 1 on Fig. 22, 2 rel., as Lunario-Aceretum Grüneberg et Schült. 1957), Chorney et al. 2005 (point 2, 1 rel., as Mercuriali-Fraxinetum (Klika 1942) Husová 1982).

Constant species: *Abies alba*, *Acer pseudoplatanus*, *Athyrium filix-femina*, *Dryopteris filix-mas*, *Fagus sylvatica*, *Filipendula ulmaria*, *Glechoma hirsuta*, *Impatiens noli-tangerae*, *Lamium maculatum*, *Lunaria rediviva*, *Milium effusum*, *Oxalis acetosella*, *Paris quadrifolia*, *Polystichum braunii*, *Rubus hirtus*, *Senecio ovatus*, *Stellaria nemorum*, *Symphytum cordatum*.

Dominants. *Acer pseudoplatanus*, *Fagus sylvatica*, *Fraxinus excelsior*, *Athyrium filix-femina*, *Dryopteris filix-mas*, *Impatiens noli-tangere*, *Rubus hirtus*, *Senecio ovatus*.

Relevés of the association are presented in Table 66.

Distribution. On silicious stony soils including screes in the Carpathians. Rare association.

Syntaxonomical notes. In Ukraine, the association is represented by its eastern (Carpathian) geographical variant. This variant differs by presence of *Dentaria glandulosa*, *Rubus hirtus*, and *Symphytum cordatum*.

Phyllitido-Aceretum Moor 1952 s.l.



Fig. 23. Phyllitido-Aceretum in Ukraine

Publications: Solomakha et al. 2004 (point 2 on Fig. 23, 1 rel.), Soroka 2008 (point 1, 2 rel.).

Constant species: *Acer pseudoplatanus*, *Actaea spicata*, *Anemone nemorosa*, *Asplenium trichomanes*, *Carpinus betulus*, *Cystopteris fragilis*, *Dentaria glandulosa*, *Fagus sylvatica*, *Phyllitis scolopendrium*, *Polypodium vulgare*, *Polystichum aculeatum*, *Symphytum cordatum*.

Dominants. *Acer pseudoplatanus*, *Carpinus betulus*, *Fagus sylvatica*; *Anemone nemorosa*, *Dentaria glandulosa*, *Lamium galeobdolon*, *Phyllitis scolopendrium*, *Polypodium vulgare*.

Relevés of the association are presented in Table 67.

Distribution. On calcareous stony soils including screes in the Carpathians and Roztochia. Rare association.

Syntaxonomical notes. In Ukraine, the association is represented by its Carpathian geographical variant. This variant differs by presence of *Dentaria glandulosa*, *Rubus hirtus* and *Symphytum cordatum*.

Aceri platanoidis-Fraxinetum excelsioris Onyshchenko 1998



Fig. 24. Aceri platanoidis-Fraxinetum excelsioris in Ukraine

Publications: Onyshchenko 1998 (point 1 on Fig. 24, 26 rel.).

Constant species: *Acer campestre*, *Acer platanoides*, *Acer pseudoplatanus*, *Anemone ranunculoides*, *Arum besserianum*, *Asarum europaeum*, *Carpinus betulus*, *Chelidonium majus*, *Convallaria majalis*, *Corydalis cava*, *Corydalis solida*, *Corylus avellana*, *Euonymus europaea*, *Euonymus verrucosa*, *Fraxinus excelsior*, *Gagea lutea*, *Galanthus nivalis*, *Galium aparine*, *Galium odoratum*, *Geranium robertianum*, *Geum urbanum*, *Lamium galeobdolon*, *Lamium maculatum*, *Melandrium dioicum*, *Mercurialis perennis*, *Polygonatum hirtum*, *Polygonatum*

multiflorum, *Pulmonaria obscura*, *Sambucus nigra*, *Scutellaria altissima*, *Stellaria holostea*, *Ulmus glabra*, *Urtica dioica*.

Dominants. *Acer campestre* (3%), *Acer platanoides* (19%), *Acer pseudoplatanus* (3%), *Carpinus betulus* (7%), *Fraxinus excelsior* (42%), *Tilia cordata* (4%), *Ulmus glabra* (5%); *Corylus avellana* (4%), *Sambucus nigra* (2%); *Alliaria petiolata* (6%), *Allium ursinum* (6%), *Anemone ranunculoides* (2%), *Corydalis cava* (6%), *Lamium maculatum* (10%), *Lunaria rediviva* (22%), *Urtica dioica* (2%).

Relevés of the association are presented in Table 68.

Nomenclatural type: rel. 2 in Table 68.

Distribution. West Podillia. On slopes and tops of limestone hills.

Variability. Differential species of subassociations are shown in Table 22.

Subass. *Aceri platanoidis-Fraxinetum typicum* Onyshchenko 1998

On tops of hills and slopes of cool expositions. Nomenclatural type: rel. 2 in Table 68.

Subass. *Aceri platanoidis-Fraxinetum bromopsietosum benekenii* Onyshchenko 1998

On warm slopes. Nomenclatural type: rel. 16 in Table 68.

Subass. *Aceri platanoidis-Fraxinetum lunarietosum redivivae* Onyshchenko 1998

On cool (northeastern and northern) slopes at altitudes above 380 m. Nomenclatural type: rel. 22 in Table 68.

Table 22. Differential species of subassociations of the *Aceri platanoidis-Fraxinetum* Onyshchenko 1998

Subassociation	lunarietosum redivivae	typicum	bromopsietosum benekenii
Number of relevés	4	9	12
<i>Cystopteris fragilis</i>	50	11	8
<i>Lunaria rediviva</i>	100	.	33
<i>Parietaria officinalis</i>	50	.	.
<i>Polypodium vulgare</i>	25	.	.
<i>Dentaria glandulosa</i>	.	22	.
<i>Daphne mezereum</i>	.	22	.
<i>Milium effusum</i>	.	56	8
<i>Anthriscus sylvestris</i>	.	22	.
<i>Scopolia carniolica</i>	.	22	.
<i>Brachypodium sylvaticum</i>	.	.	25
<i>Bromopsis benekenii</i>	.	.	67
<i>Campanula rapunculoides</i>	.	.	50
<i>Carex muricata</i>	.	.	42
<i>Crataegus curvisepala</i>	.	11	42
<i>Dactylis glomerata</i> s.l.	.	.	50
<i>Hordelymus europaeus</i>	.	11	75
<i>Lathyrus niger</i>	.	.	17
<i>Lathyrus vernus</i>	.	.	17
<i>Mycelis muralis</i>	.	.	33
<i>Poa nemoralis</i>	25	.	75
<i>Ranunculus cassubicus</i>	.	.	58
<i>Veronica chamaedrys</i>	.	11	50
<i>Campanula trachelium</i>	.	44	75
<i>Glechoma hirsuta</i>	.	56	83
<i>Viola mirabilis</i>	.	56	67

Anthriscus nitidi-Aceretum pseudoplatani Ralo et Onyshchenko 2008



Fig. 25. *Anthriscus nitidi-Aceretum pseudoplatani* in Ukraine

Publications: Ralo & Onyshchenko 2008 (point 1 on Fig. 25, 21 rel.; point 2, 3 rel.).

Constant species: *Acer platanoides*, *Acer pseudoplatanus*, *Aegopodium podagraria*, *Ajuga reptans*, *Anemone nemorosa*, *Anemone ranunculoides*, *Anthriscus nitida*, *Asarum europaeum*, *Athyrium filix-femina*, *Carex sylvatica*, *Carpinus betulus*, *Chaerophyllum aromaticum*, *Chrysosplenium alternifolium*, *Circaea lutetiana*, *Corydalis cava*, *Corydalis solida*, *Corylus avellana*, *Dentaria glandulosa*, *Dryopteris carthusiana*, *Dryopteris filix-mas*, *Euonymus europaea*, *Festuca gigantea*, *Ficaria verna*, *Fraxinus excelsior*, *Gagea lutea*, *Galium odoratum*, *Geranium phaeum*, *Geranium robertianum*, *Geum urbanum*, *Impatiens noli-tangereae*, *Isopyrum thalictroides*, *Lamium galeobdolon*, *Lamium maculatum*, *Mercurialis perennis*, *Milium effusum*, *Oxalis acetosella*, *Paris quadrifolia*, *Polygonatum multiflorum*, *Pulmonaria obscura*, *Ranunculus cassubicus*, *Ranunculus lanuginosus*, *Sambucus nigra*, *Stachys sylvatica*, *Stellaria holostea*, *Stellaria nemorum*, *Tilia cordata*, *Ulmus glabra*, *Urtica dioica* s.l., *Viola reichenbachiana*.

Dominants. *Acer platanoides* (6%), *Acer pseudoplatanus* (29%), *Carpinus betulus* (5%), *Fagus sylvatica* (2%), *Fraxinus excelsior* (26%), *Quercus robur* (4%), *Tilia cordata* (4%), *Ulmus glabra* (6%); *Aegopodium podagraria* (7%), *Allium ursinum* (2%), *Anemone nemorosa* (18%), *Anthriscus nitida* (3%), *Asarum europaeum* (6%), *Corydalis cava* (10%), *Corydalis solida* (8%), *Dentaria glandulosa* (8%), *Galium odoratum* (3%), *Hedera helix* (2%), *Isopyrum thalictroides* (3%), *Lamium galeobdolon* (7%), *Mercurialis perennis* (3%), *Urtica dioica* (4%).

Relevés of the association are presented in Table 69.

Nomenclatural type: rel. 5 in Table 69.

Distribution. West Podillia. Rare association of bottoms of valleys and ravines in limestone rocks.

3.10. Alnion incanae

All. Alnion incanae Pawłowski 1928 includes hygrophylous forests. In Ukraine, it is represented by 7 associations. Differential species of the associations are given in Table 23.

Table 23. Differential species of associations of all. Alnion incanae.

Association	FU	FA	AtA	FpU	Ai	PA	OA
Number of relevés	28	9	9	6	11	7	10
<i>Actaea spicata</i>	26	.	.	.	.	.	.
<i>Corydalis cava</i>	21	11	.	.	.	.	.
<i>Gagea lutea</i>	29	.	.	.	.	.	.
<i>Chaerophyllum temulum</i>	38	11	.	.	.	.	.
<i>Chrysosplenium alternifolium</i>	21	67	.	.	27	.	.
<i>Ribes nigrum</i>	4	44	.	.	.	.	.
<i>Geum rivale</i>	14	67	.	.	9	.	.
<i>Lysimachia vulgaris</i>	11	44	89	33	.	14	.
<i>Acer tataricum</i>	31	11	89	.	.	.	.
<i>Carex elongata</i>	.	11	100	.	.	.	.
<i>Chelidonium majus</i>	2	.	56	.	9	.	.
<i>Pyrus communis</i>	18	.	67	.	.	.	20
<i>Carex remota</i>	.	.	.	83	.	43	.
<i>Carex strigosa</i> *	.	.	.	100	.	.	.
<i>Carex sylvatica</i>	6	.	.	50	27	14	.
<i>Crocus heuffelianus</i>	.	.	.	++	.	.	.
<i>Fraxinus angustifolia</i>	.	.	.	100	.	.	.
<i>Leucosium aestivum</i>	.	.	.	33	.	.	.
<i>Phalaroides arundinacea</i>	.	.	.	67	.	.	.
<i>Carduus personata</i>	.	.	.	.	27	.	.
<i>Dentaria glandulosa</i>	.	11	.	.	60	.	.
<i>Lunaria rediviva</i>	.	.	.	.	27	.	.
<i>Matteuccia struthiopteris</i>	.	.	.	.	55	.	.
<i>Petasites hybridus</i>	.	.	.	.	27	.	.
<i>Salvia glutinosa</i>	.	.	.	.	64	.	.
<i>Solidago virgaurea</i>	.	.	.	.	27	.	.
<i>Symphytum cordatum</i>	.	.	.	.	55	14	.
<i>Telekia speciosa</i>	.	.	.	.	27	.	.
<i>Alnus incana</i>	2	.	.	.	100	100	.
<i>Chaerophyllum hirsutum</i>	.	.	.	.	27	29	.
<i>Gentiana asclepiadea</i>	.	.	.	.	27	14	.
<i>Oxalis acetosella</i>	2	11	.	.	27	43	.
<i>Petasites albus</i>	.	.	.	.	27	43	.
<i>Rubus hirtus</i>	.	.	.	.	36	43	.
<i>Abies alba</i>	.	.	.	.	9	29	.
<i>Caltha palustris</i> s.l.	.	44	.	33	9	100	.
<i>Circaea alpina</i>	.	.	.	.	9	43	.
<i>Equisetum sylvaticum</i>	.	.	.	.	9	71	.
<i>Lonicera nigra</i>	.	.	.	.	.	29	.
<i>Myosotis palustris</i>	.	.	.	33	.	57	.
<i>Picea abies</i>	2	.	.	.	9	100	.
<i>Vaccinium myrtillus</i>	.	.	.	.	.	43	.
<i>Berberis vulgaris</i>	.	.	.	.	.	.	20
<i>Clematis vitalba</i>	.	.	.	.	.	.	40
<i>Conium maculatum</i>	.	11	.	.	.	.	30
<i>Mentha longifolia</i>	.	.	.	.	.	.	20
<i>Arum elongatum</i>	.	.	.	.	.	.	90
<i>Bromopsis benekenii</i>	.	.	.	.	.	.	80
<i>Bupleurum rotundifolium</i>	.	.	.	.	.	.	80
<i>Colchicum umbrosum</i>	.	.	.	.	.	.	60
<i>Cornus mas</i>	.	.	.	.	.	.	60

Association	FU	FA	AtA	FpU	Ai	PA	OA
<i>Dentaria quinquefolia</i>	.	.	.	.	.	.	90
<i>Euonymus latifolia</i>	.	.	.	.	.	.	50
<i>Galanthus plicatus</i>	.	.	.	.	.	.	80
<i>Geranium purpureum</i>	.	.	.	.	.	.	50
<i>Ligustrum vulgare</i>	.	.	.	.	.	.	60
<i>Primula acaulis</i>	.	11	.	.	9	.	80
<i>Ranunculus constantinopolitanus</i>	.	.	.	.	.	.	50
<i>Viola dehnhardtii</i>	.	.	.	.	.	.	70
<i>Ornithogalum ponticum</i>	.	.	.	.	.	.	40
<i>Physospermum cornubiense</i>	.	.	.	.	.	.	20
<i>Galium palustre</i>	2	33	.	17	9	43	.
<i>Carpinus betulus</i>	52	11	.	50	18	.	.
<i>Alnus glutinosa</i>	21	100	100	.	.	14	100

Abbreviations: FU – Ficario-Ulmetum, FA – Fraxino-Alnetum, FpU – Fraxino pannonicae-Ulmetum, Ai – Alnetum incanae, PA – Piceo-Alnetum, OA – Ornithogalo pontici-Alnetum.

* – true constancy of *Carex strigosa* is lower, it is 100% in the table because all relevés are taken from an article devoted to this species.

Alnetum incanae Lüdi 1921

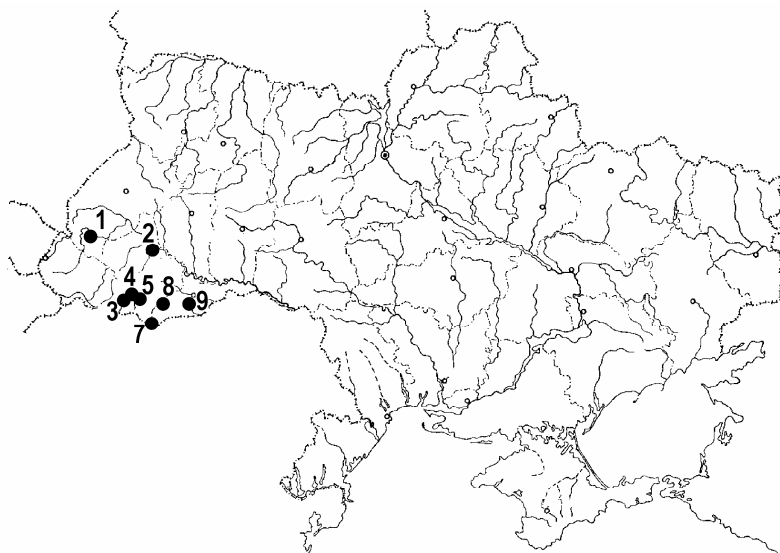


Fig. 26. *Alnetum incanae* in Ukraine

Publications: Solomakha et al. 2004 (point 1 on Fig. 26, 2 rel.), Chorney et al. 2005 (point 8, 3 rel.), Klimuk et al. 2006 (point 4, 1 rel.).

Constant species: *Alnus incana*, *Pulmonaria obscura*, *Salvia glutinosa*, *Urtica dioica*.

Dominants. *Acer pseudoplatanus* (10%), *Alnus incana* (45%); *Sambucus nigra* (5%); *Aegopodium podagraria* (4%), *Filipendula ulmaria* (8%), *Glechoma hirsuta* (6%), *Matteuccia struthiopteris* (7%), *Salvia glutinosa* (3%), *Symphytum cordatum* (8%), *Urtica dioica* (11%).

Relevés of the association are presented in Table 70.

Distribution. Floodplains in the Carpathians, on the Cis-Carpathian lowland and adjacent part of West Podillia.

Piceo-Alnetum Mráz 1959

Fig. 27. Piceo-Alnetum in Ukraine



Synonyms: *Caltho laetae*-Alnetum (Zarz. 1963) Stuchlik 1968.

Publications: Solomakha et al. 2004 (point 1 on Fig. 27, 3 rel.), Chorney et al. 2005 (point 4, 1 rel.), Klimuk et al. 2006 (point 2, 2 rel.).

Constant species: *Alnus incana*, *Athyrium filix-femina*, *Caltha palustris* s.l., *Dryopteris carthusiana*, *Equisetum sylvaticum*, *Picea abies*, *Ranunculus repens*, *Senecio ovatus*, *Sorbus aucuparia*.

Dominants. *Abies alba*, *Acer pseudoplatanus*, *Alnus incana*, *Picea abies*; *Caltha palustris* s.l., *Carex brizoides*, *Carex remota*, *Equisetum sylvaticum*, *Filipendula ulmaria*, *Ranunculus repens*, *Rubus hirtus*.

Relevés of the association are presented in Table 71.

Distribution. In the Carpathians.

Ficario-Ulmetum minoris Knapp 1942 em. J.Matuszkiewicz 1976

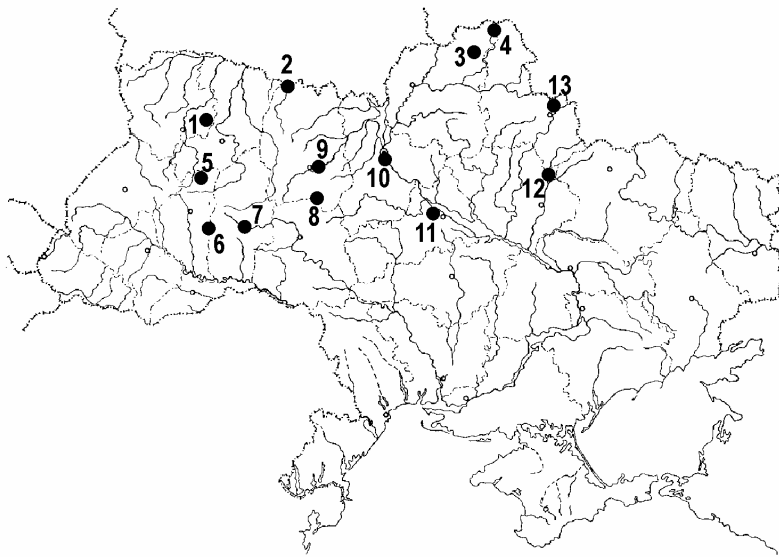


Fig. 28. *Ficario-Ulmetum minoris* in Ukraine

Synonyms: *Convallario-Padietum* Bajrak 1996.

Publications: Bajrak 1996 (4 rel. as *Convallario-Padietum* Bajrak 1996, one of them from point 12 on Fig. 28), Shevchyk et al. 1997 (point 11, 4 rel.), Vorobyov et al. 1997 (point 2, 3 rel. as *Stellario-Carpinetum* Oberd. 1957), Onyshchenko 1998 (point 6, 3 rel.), Goncharenko 2001 and Goncharenko 2003 (point 13, 5 rel.), Onyshchenko 2002 (point 5, 2 rel.), Biodiversity... 2004 (point 1, 1 rel.), Orlov & Yakushenko 2005 (point 9, 6 rel. as *Ficario-Ulmetum minoris* Knapp 1942 em. J.Matuszkiewicz 1976 and *Fraxino-Alnetum* W.Matuszkiewicz 1952), Panchenko & Onyshchenko 2005 (point 3, 4 rel.).

Constant species: *Acer platanoides*, *Aegopodium podagraria*, *Anemone ranunculoides*, *Euonymus europaea*, *Ficaria verna*, *Fraxinus excelsior*, *Geum urbanum*, *Pulmonaria obscura*, *Urtica dioica*.

Dominants. *Alnus glutinosa* (8%), *Fraxinus excelsior* (11%), *Quercus robur* (26%), *Tilia cordata* (6%), *Ulmus minor* (5%), *Ulmus glabra* (2%); *Corylus avellana* (5%), *Padus avium* (3%); *Aegopodium podagraria* (6%), *Impatiens parviflora* (7%), *Ficaria verna* (6%), *Pulmonaria obscura* (3%), *Urtica dioica* (8%).

Relevés of the association are presented in Table 72.

Distribution. Lowlands of the deciduous and forest-steppe regions. In floodplains, gullies and depressions, sometimes on plateaus with poor drainage.

Variability. Differential species of subassociations are shown in Table 24.

Subass. *Ficario-Ulmetum minoris typicum*

Subass. *Ficario-Ulmetum minoris franguletosum alni* subass. nov. prov.

On rather poor soils. More rich in thermophilous light-demanded species than other subassociations. Typical for the floodplain of the Dnipro.

Subass. *Ficario-Ulmetum minoris chrysosplenietosum* Knapp 1942 em. J.Matuszkiewicz 1976

The richest in character species of ord. *Fagetalia sylvaticae* subassociation. In depressions and valleys of small rivers.

Table 24. Differential species of subassociations of the *Ficario-Ulmetum minoris* Knapp 1942 em. J.Matuszkiewicz 1976

Subassociation	franguletosum alni	typicum	chrysosplenietosum
Number of relevés	5	7	16
<i>Acer tataricum</i>	80	.	13
<i>Frangula alnus</i>	80	.	.
<i>Glechoma hederacea</i>	80	.	.
<i>Viola hirta</i>	40	.	.
<i>Brachypodium sylvaticum</i>	60	29	.
<i>Lysimachia nummularia</i>	80	57	.
<i>Actaea spicata</i>	.	71	6
<i>Circaea lutetiana</i>	.	43	38
<i>Dryopteris carthusiana</i>	.	29	50
<i>Dryopteris filix-mas</i>	.	29	38

Subassociation	franguletosum alni	typicum	chrysosplenietosum
<i>Galium odoratum</i>	.	29	44
<i>Padus avium</i>	.	71	50
<i>Pulmonaria obscura</i>	.	57	88
<i>Alnus glutinosa</i>	.	.	63
<i>Asarum europaeum</i>	.	.	63
<i>Chrysosplenium alternifolium</i>	.	.	63
<i>Corydalis cava</i>	.	.	63
<i>Corydalis solida</i>	.	.	63
<i>Ficaria verna</i>	.	29	94
<i>Gagea lutea</i>	.	.	88

Fraxino-Alnetum W.Matuszkiewicz 1952

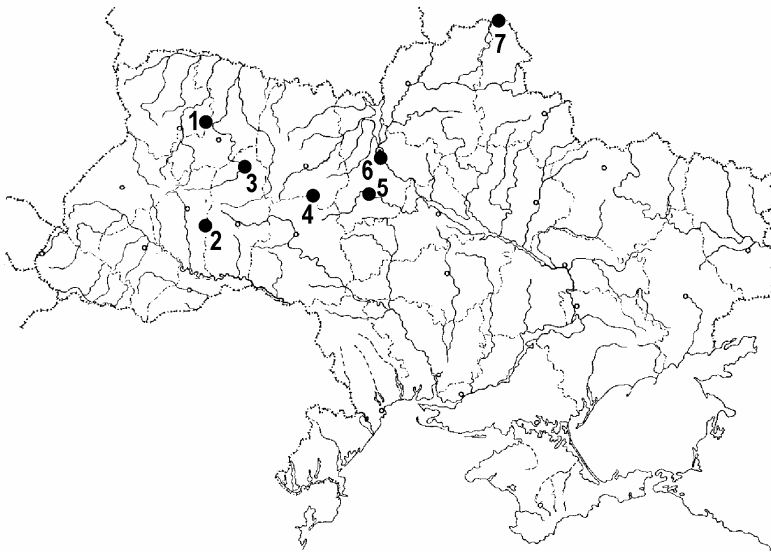


Fig. 29. Fraxino-Alnetum in Ukraine

Publications: Onyshchenko 1998 (point 2 on Fig. 29, 1 rel.), Biodiversity... 2004 (point 1, 1 rel.).

Constant species: *Alnus glutinosa*, *Dryopteris carthusiana*, *Humulus lupulus*, *Lysimachia vulgaris*, *Urtica dioica* s.l.

Dominants. *Alnus glutinosa* (53%), *Betula pendula* (4%), *Fraxinus excelsior* (3%), *Quercus robur* (2%), *Tilia cordata* (3%); *Corylus avellana* (15%), *Euonymus verrucosa* (2%), *Frangula alnus* (2%); *Aegopodium podagraria* (10%), *Anemone nemorosa* (8%), *Anemone ranunculoides* (6%), *Cardamine amara* (5%), *Chrysosplenium alternifolium* (2%), *Ficaria verna* (4%), *Filipendula ulmaria* (4%), *Geum rivale* (5%), *Urtica dioica* s.l. (13%).

Relevés of the association are presented in Table 73.

Distribution. Lowlands of the deciduous and forest-steppe regions and the northeastern part of the steppe region. On wet soils in floodplains, gullies and depressions.

Aceri tatarici-Alnetum ass. nov. prov.



Fig. 30. *Aceri tatarici*-Alnetum in Ukraine

Constant species: *Acer tataricum*, *Alnus glutinosa*, *Carex elongata*, *Crataegus curvisepala*, *Dryopteris carthusiana*, *Humulus lupulus*, *Lysimachia vulgaris*, *Pyrus communis*, *Rubus caesius*, *Stellaria holostea*, *Ulmus laevis*.

Dominants. *Acer negundo* (4%), *Acer tataricum* (3%), *Alnus glutinosa* (72%), *Ulmus laevis* (6%); *Frangula alnus* (6%); *Athyrium filix-femina* (18%), *Humulus lupulus* (2%), *Rubus caesius* (6%), *Stellaria holostea* (13%), *Urtica dioica* (2%).

Relevés of the association are presented in Table 74.

Distribution. Valleys of rivers in the steppe region.

Fraxino pannonicae-Ulmetum Soó 1960



Fig. 31. *Fraxino pannonicae*-Ulmetum in Ukraine

Publications: Danylyk & Kish 2008 (6 rel., points 1-3 on Fig. 31).

Constant species: *Carex remota*, *Carex strigosa*, *Carex sylvatica*, *Fraxinus angustifolia*, *Glechoma hederacea*, *Quercus robur*, *Rubus caesius*, *Urtica dioica*. No data on spring ephemerals. Probably *Anemone nemorosa*, *Crocus heuffelianus*, *Ficaria verna* have high constancies.

Dominants. *Fraxinus angustifolia*, *Quercus robur*, *Ulmus minor*; *Anemone nemorosa*, *Glechoma hederacea*, *Impatiens noli-tangere*, *Phalaroides arundinacea*, *Rubus caesius*, *Urtica dioica*.

Relevés of the association are presented in Table 75.

Distribution. Transcarpathian lowland.

Ornithogalo pontici-Alnetum glutinosae Didukh 1996 emend.



Fig. 32. *Ornithogalo pontici*-*Alnetum* in Ukraine

Synonym: *Clemato vitalbae*-*Alnetum glutinosae* Didukh 1996.

Publications: Didukh 1996 (10 rel.).

Constant species: *Alnus glutinosa*, *Anthriscus sylvestris*, *Arctium nemorosum*, *Arum elongatum*, *Bromopsis benekenii*, *Bupleurum rotundifolium*, *Dentaria quinquefolia*, *Ficaria verna*, *Galanthus plicatus*, *Galium aparine*, *Primula acaulis*, *Swida sanguinea*, *Ulmus glabra*, *Urtica dioica*, *Viola dehnhardtii*.

Dominants. *Alnus glutinosa*; *Cornus mas*, *Corylus avellana*; *Anthriscus sylvestris*, *Mercurialis perennis*, *Urtica dioica*.

Relevés of the association are presented in Table 76.

Nomenclatural type: rel. 8 in Table 76.

Distribution. Along rivers in the Crimean Mountains at altitudes 400-700 m.

Variability. The association includes two subassociations, which formerly were published as associations. Differential species of subassociations are shown in Table 25.

Subass. *Ornithogalo pontici*-*Alnetum clematietosum vitalbae* (Didukh 1996) stat. nov. (*Clemato vitalbae*-*Alnetum glutinosae* Didukh 1996). Nomenclatural type: rel. 2 in Table 76.

Subass. *Ornithogalo pontici*-*Alnetum ornithogaletosum pontici* (Didukh 1996) stat. nov. (*Ornithogalo pontici*-*Alnetum glutinosae* Didukh 1996 s.str.). Nomenclatural type: rel. 8 in Table 76 (nomenclatural type of the association).

Table 25. Differential species of subassociations of the *Ornithogalo pontici*-*Alnetum glutinosae* Didukh 1996

Subassociation	<i>clematietosum vitalbae</i>	<i>ornithogaletosum pontici</i>
Number of relevés	5	5
<i>Clematis vitalba</i>	80	.
<i>Conium maculatum</i>	60	.
<i>Geranium purpureum</i>	80	20
<i>Lamium maculatum</i>	80	.
<i>Mentha longifolia</i>	60	.
<i>Sambucus nigra</i>	80	20
<i>Corylus avellana</i>	20	100
<i>Heracleum sibiricum</i>	20	80
<i>Mercurialis perennis</i>	.	80
<i>Ornithogalum ponticum</i>	.	80

4. Geographical distribution of syntaxa and their dependence on edaphical factors

Associations of the order *Fagetalia sylvaticae* are of high regional specificity. Most of them are large geographical variants of alliances. Every region has 1-2 prevailing associations of this order. These associations belong to the alliances *Asperulo-Fagion*, *Carpinion*, *Querco-Tilion*, *Scillo sibericae-Quercion*, and *Paeonio dauricae-Quercion*. Associations of the alliances *Tilio-Acerion*, *Cephalanthero-Fagion*, and *Alnion incanae* occupy less extensive areas.

Prevailing associations of the orders *Fagetalia sylvaticae* and *Quercetalia pubescentis* in the territory of Ukraine are shown on Fig. 33. Forests of the *Quercetalia pubescentis* predominates (among forest vegetation) in the southern part of Ukraine.

The zonal associations of the flatland portion of the broadleaved forests region are *Tilio-Carpinetum*, *Stellario holostea-Fagetum*, *Isopyro thalictroidis-Carpinetum*, *Mercurialo perennis-Quercetum*, and *Aceri campestris-Tilietum cordatae*. The zonal association of southeastern Cis-Carpathia (Chernivtsi Region) is *Carpino-Fagetum*. The mountain belt of the Carpathians is formed mainly by the *Symphyto cordati-Fagetum*. The associations *Carpino-Fagetum* and *Carici pilosae-Carpinetum* prevail in the peripheral part of the Carpathians on the southwestern macroslope (the Volcanic Carpathians).

The zonal forest associations of the forest-steppe region are *Isopyro thalictroidis-Carpinetum*, *Galeobdolo lutei-Carpinetum*, and *Stellario holostea-Aceretum platanoidis*. In the southwestern forest-steppe, forests of the *Aceri tatarici-Quercion* prevail. The zonal association of the Transcarpathian lowland is *Circaeum-Carpinetum*.

The broadleaved forests of the steppe region are represented by alliances *Aceri tatarici-Quercion* and *Scillo sibericae-Quercion*.

In the Crimean Mountains, the lower belt is formed mainly by forests of the order *Quercetalia pubescentis*. The forests of the *Paeonio dauricae-Quercion petraeae* and the *Lathyro aurei-Fagetum* predominate at higher altitudes.

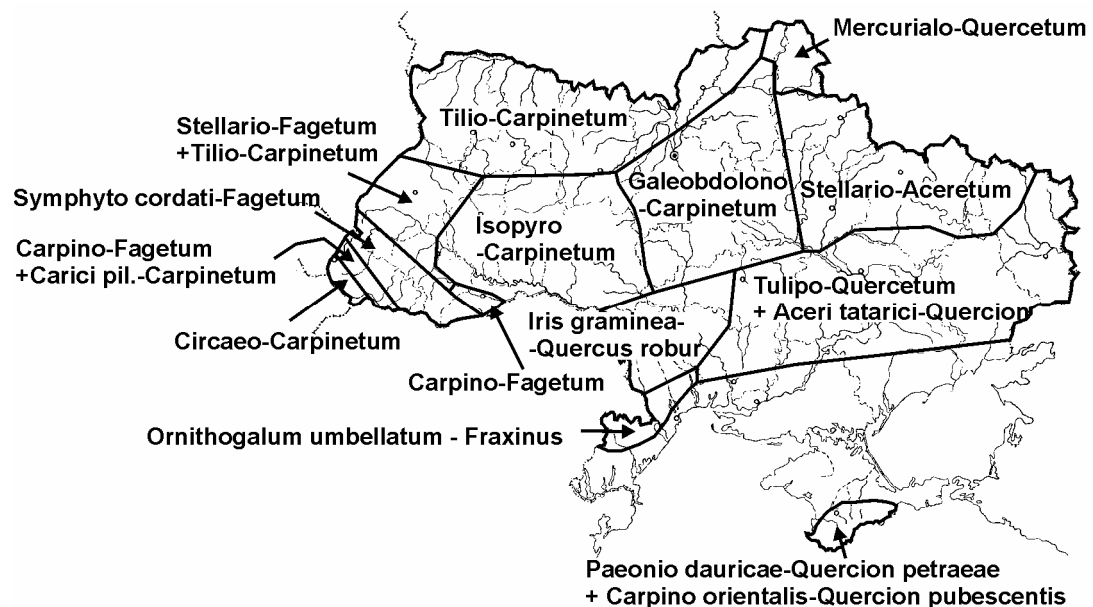


Fig. 33. Prevailing syntaxa of the orders *Fagetalia sylvaticae* and *Quercetalia pubescentis* on the territory of Ukraine.

Altitudinal and edaphic differentiation of beech forests of western Ukraine is shown in Fig. 34. On lowlands, the neutrophilous associations (*Stellario holostea-Fagetum* and *Carpino-Fagetum*) occupy the largest areas, and the acidophilous association (*Luzulo pilosae-Fagetum*) is probably the rarest. In the mountain belt, the neutrophilous association (*Symphyto cordati-Fagetum*) is the most common too. The calciphilous association (*Seseli libanotidis-Fagetum*) is the rarest in this belt. Among associations of the upper mountain belt the *Calamagrostio villosae-Fagetum* has larger area. The *Athyrio disentifolii-Fagetum* is very rare in Ukraine. It is found only in the westernmost part of the Ukrainian Carpathians. Forests of high altitudes in the southeastern part of the Ukrainian

Carpathians are dominated mainly by *Picea abies*. In some areas the upper limit of forests is formed by moderately mountain associations *Symphyto cordati-Fagetum* and *Luzulo-Fagetum*.

↑ altitude	?	<i>Athyrio distentifolii-Fagetum</i>	<i>Calamagrostio villosae-Fagetum</i>
	<i>Seseli libanotidis-Fagetum</i>	<i>Symphyto cordati-Fagetum</i>	<i>Luzulo-Fagetum</i>
	<i>Euonymo verrucosae-Fagetum</i>	<i>Stellario holostaeae-Fagetum</i> , <i>Carpino-Fagetum</i>	<i>Luzulo pilosae-Fagetum</i>
	→ acidity		

Fig. 34. Distribution of associations of beech forest in western Ukraine depending on soil acidity and altitude.

Subassociations are mainly edaphically conditioned. When developing the classification of Ukrainian *Fagetalia sylvaticae* forests the principle of homological series has been used so subassociations are distinguished using similar sets of differential species.

The differential species of two opposed homological series of subassociations of the broadleaved geobotanical region are shown in Table 26. The most “acidic” subassociations belong to the series *Orthilia secunda*. This series includes subass. *Tilio-Carpinetum calamagrostietosum*, *Mercurialo perennis-Quercetum roboris calamagrostietosum arundinaceae*, *Seseli libanotidis-Fagetum orthilietosum secundae*, and *Stellario holostaeae-Fagetum luzuletosum pilosae*. The blocks of differential species of acidophilous subassociations of lowland non-beech forests (*Tilio-Carpinetum* and *Mercurialo perennis-Quercetum roboris*) are almost identical.

The most “trophic”, “alkaline” and nitrophilous subassociations belong to the series *Corydalis cava*. It includes subass. *Tilio-Carpinetum corydaletosum cavae*, *Mercurialo perennis-Quercetum roboris corydaletosum cavae*, *Stellario holostaeae-Fagetum corydaletosum cavae*, *Euonymo verrucosae-Fagetum corydaletosum solidae*, *Symphyto cordati-Fagetum corydaletosum cavae*, *Seseli libanotidis-Fagetum vincetoxicetosum hirundinariae*. Most differential species of these subassociations are spring ephemeroïds, among other species – *Geranium robertianum*, *Lamium maculatum*, *Sambucus nigra*. In this series the subassociations of associations *Tilio-Carpinetum* and *Mercurialo perennis-Quercetum* are the closest too. Some species (*Adoxa moschatellina*, *Ficaria verna*, *Gagea lutea*) have considerable constancies only in lowland forests. Such species as *Chrysosplenium alternifolium*, *Gagea minima*, and *Lathrea squamaria* have low constancies in beech forests.

Table 26. Differential species of series of subassociations of the deciduous forest geobotanical region.

	TC calam	MQ calam	ShF luzul	SIF orth	TC coryd	MQ coryd	ShF coryd	EvF coryd	ScF coryd	SIF vinc
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D.s. of series *Orthilia secunda*

<i>Orthilia secunda</i>	32	29	60	67	.	.	2	.	.	.
<i>Vaccinium myrtillus</i>	58	14	10	67
<i>Calamagrostis arundinacea</i>	63	71	.	100	.	.	.	.	.	50
<i>Luzula pilosa</i>	84	43	80	.	4	10	10	5	.	.
<i>Veronica officinalis</i>	21	14	60	.	.	.	5	5	.	.
<i>Pteridium aquilinum</i>	63	57	.	.	.	.	.	5	.	.
<i>Rubus saxatilis</i>	42	71	.	.	.	20	.	.	.	.
<i>Trientalis europaea</i>	53	71	.	.	.	30	.	.	.	.

	TC calam	MQ calam	ShF luzul	SIF orth	TC coryd	MQ coryd	ShF coryd	EvF coryd	ScF coryd	SIF vinc
D.s. of series <i>Corydalis cava</i>										
<i>Anemone ranunculoides</i>	.	14	.	.	88	100	72	77	25	50
<i>Corydalis cava</i>	83	90	84	41	75	100
<i>Corydalis solida</i>	96	40	84	68	100	100
<i>Geranium robertianum</i>	11	.	.	.	46	10	81	55	25	100
<i>Isopyrum thalictroides</i>	.	.	30	.	58	.	88	86	100	.
<i>Sambucus nigra</i>	.	.	30	.	42	.	88	68	75	50
<i>Adoxa moschatellina</i>	50	30	36	14	.	.
<i>Ficaria verna</i>	58	70	45	23	.	.
<i>Gagea lutea</i>	50	80	57	23	.	.
<i>Lamium maculatum</i>	17	40	16	5	.	.
<i>Chrysosplenium alternifolium</i>	21	10	7	.	.	.
<i>Gagea minima</i>	17	20	.	.	.	.
<i>Lathraea squamaria</i>	5	.	.	.	38	30	3	.	.	.
Other differential species										
<i>Hieracium sabaudum</i> s.l.	.	.	40	.	.	.	.	5	.	.
<i>Huperzia selago</i>	.	.	60	.	.	.	7	.	.	.
<i>Dryopteris dilatata</i>	.	.	70	.	.	.	23	.	.	.
<i>Hieracium murorum</i> s.l.	.	.	70	.	.	.	3	41	.	.
<i>Luzula luzuloides</i>	.	.	.	33	.	.	.	.	25	.

Notes. Abbreviations: TC calam – Tilio-Carpinetum calamagrostietosum, MQ calam – Mercurialo perennis-Quercetum roboris calamagrostietosum arundinaceae, ShF luzul – Stellario holostaeae-Fagetum luzuletosum pilosae, SIF orth – Seseli libanotidis-Fagetum, TC coryd – Tilio-Carpinetum corydaletosum, MQ coryd – Mercurialo perennis-Quercetum roboris corydaletosum cavae, ShF coryd – Stellario holostaeae-Fagetum corydaletosum cavae, EvF coryd – Euonymo verrucosae-Fagetum corydaletosum solidae, ScF coryd – Symphyto cordati-Fagetum corydaletosum cavae, SIF vinc – Seseli libanotidis-Fagetum vincetoxicetosum hirundinariae.

The most widespread series of homological subassociations of the forest-steppe region are series *Carex pilosa* and *Lamium maculatum*. Subassociations of these series are rather similar so intermediate subassociations (“typicum”) are not distinguished. Differential species of these series are given in Table 27.

Table 27. Differential species of series of subassociations of the forest-steppe geobotanical region.

	IC car	GC bet	ShA car	IC coryd	GC samb	ShA par
D.s. of series <i>Carex pilosa</i>						
<i>Carex pilosa</i>	100	74	53	20	13	9
<i>Carex digitata</i>	19	20	10	1	.	.
<i>Convallaria majalis</i>	52	48	40	1	.	27
<i>Dactylis glomerata</i>	43	17	27	5	3	.
<i>Lathyrus vernus</i>	86	41	93	37	9	23
<i>Majanthemum bifolium</i>	43	54	.	18	.	.
<i>Melica nutans</i>	48	26	3	1	.	.
<i>Viola mirabilis</i>	57	57	70	36	3	18
D.s. of series <i>Lamium maculatum</i>						
<i>Lamium maculatum</i>	14	4	.	39	47	50
<i>Alliaria petiolata</i>	29	9	7	27	53	41
<i>Chaerophyllum temulum</i>	5	13	.	30	38	27

	IC car	GC bet	ShA car	IC coryd	GC samb	ShA par
<i>Sambucus nigra</i>	14	9	.	61	56	18
<i>Urtica dioica</i>	10	35	.	76	53	68
Other differential species						
<i>Geranium phaeum</i>	.	.	.	31	.	.

Notes. Abbreviations: IC car – Isopyro-Carpinetum caricetosum pilosae, GC bet – Galeobdolon-Carpinetum betuletosum, ShA car – Stellario holostaeae-Aceretum caricetosum pilosae, IC coryd – Isopyro-Carpinetum corydaletosum cavae, GC samb – Galeobdolon-Carpinetum sambucetosum nigrae, ShA par – Stellario holostaeae-Aceretum parietosum quadrifoliae.

Results of the phytoindicational assessment of edaphic factors for the subassociations are presented in Table 28. Phytoindication has been performed using the database of species ecology developed in the Department of Ecology of Phytosystems of the M.G. Kholodny Institute of Botany (Kyiv). Weight of species was proportional to their constancy. The result of these calculations shows that the main gradient of variability of the associations at the level of subassociations is linked to nitrates content. In the deciduous forest region, pH and soil richness are also important.

Table 28. Means and standard deviations of edaphical phytoindicational indices for series of homological subassociations

	Hd	Rc	Nt	Tr	Lc
Associations of the deciduous forest region					
Series <i>Orthilia secunda</i>					
Mean	11.99	7.12	5.49	6.06	4.77
Standard deviation	0.22	0.35	0.18	0.24	0.31
Series <i>Corydalis cava</i>					
Mean	11.97	7.89	6.51	6.50	4.57
Standard deviation	0.24	0.15	0.32	0.21	0.23
Associations of the forest-steppe region					
Series <i>Carex pilosa</i>					
Mean	11.84	8.11	6.45	6.52	4.74
Standard deviation	0.11	0.11	0.02	0.04	0.12
Series <i>Lamium maculatum</i>					
Mean	11.94	8.15	6.91	6.61	4.81
Standard deviation	0.04	0.08	0.05	0.03	0.13
Subassociations with light-demanded species					
Mean	11.62	8.16	6.24	6.57	5.13
Standard deviation	0.18	0.05	0.15	0.02	0.26

Notes: Hd – soil moisture (scale of 23 degrees of D.M.Tsiganov), Rc – alkalinity (13 degrees, D.M.Tsiganov), Nt – nitrates content (11 degrees, D.M. Tsiganov), Tr – salt conditions (soils richness) (19 degrees, D.M. Tsiganov), Lc – light conditions (9 degrees, H. Ellenberg).

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Appendix. Relevés

The scale of abundance used in most relevés is based on the cover of taxa: “+” – 0%, “1” – 1-4%, “2” – 5-12%, “3” – 13-25%, “4” – 26-50%, “5” – > 50%.

A.1. Asperulo-Fagion

Table 29. *Athyrio distentifolii*-Fagetum Willner 2002

Number in table	1	2	Number in table	1	2
Exposition	E	E	<i>Pyterhrum clusii</i>	.	1
Inclination	40	40	<i>Rosa pendulina</i>	.	1
Altitude	1065	1070	<i>Rubus idaeus</i>	1	.
Tree and shrub layer	80	25	<i>Senecio ovatus</i>	.	+
Herb layer	90	100	<i>Solidago virgaurea</i>	1	.
Number of vascular plants species	18	41	<i>Sorbus aucuparia</i>	.	+

D *Athyrio distentifolii*-Fagetum

<i>Geranium sylvaticum</i>	+	1
<i>Phyteuma spicatum</i>	+	+

Ch *Fagetalia sylvaticae*

<i>Acer pseudoplatanus</i>	+	1
<i>Fagus sylvatica</i>	5	3

Other species

<i>Achillea stricta</i>	.	+
<i>Aconitum</i> sp.	+	.
<i>Anemone nemorosa</i>	1	+
<i>Aposoeris foetida</i>	+	.
<i>Astrantia major</i>	.	2
<i>Athyrium filix femina</i>	.	+
<i>Calamagrostis arundinacea</i>	5	2
<i>Campanula rapunculoides</i>	.	+
<i>Cardaminopsis halleri</i>	.	1
<i>Cirsium eristhales</i>	+	2
<i>Corylus avellana</i>	.	2
<i>Dactylis slovenica</i>	.	1
<i>Deschampsia caespitosa</i>	.	1
<i>Digitalis grandiflora</i>	.	1
<i>Galium intermedium</i>	1	2
<i>Gentiane asclepiadea</i>	1	1
<i>Hylotelephium argutum</i>	.	1
<i>Hylotelephium maximum</i>	.	+
<i>Hypericum maculatum</i>	+	1
<i>Knautia maxima</i>	.	2
<i>Laserpitium latifolium</i>	1	2
<i>Lathyrus laevigatus</i>	2	2
<i>Lilium martagon</i>	.	1
<i>Luzula luzuloides</i>	.	1
<i>Melica nutans</i>	+	1
<i>Orchis mascula</i>	.	+
<i>Picris hieracioides</i>	.	+
<i>Pleurospermum austriacum</i>	.	+
<i>Poa chaixii</i>	.	1
<i>Polygonatum verticillatum</i>	.	+
<i>Potentilla erecta</i>	.	+

<i>Symphytum tuberosum</i> s.l. (<i>S. angustifolium</i>)	.	+
<i>Valeriana collina</i>	.	+
<i>Vincetoxicum hirundinaria</i>	.	+

Source of data: Hadač et al. 1996 (tab. 2).

Authors: J. Terray, M. Bural and L. Tassenkevich.

Date: 19.06.1992.

Location: Zakarpatska Region, Uzhansky National Nature Park, Stinka.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
<i>Mercurialis perennis</i>	.	+	.	.	3	2	.	1	+	+	.	.	.	.	+	1	.	+	.	1
<i>Milium effusum</i>	+	.	.	+	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Paris quadrifolia</i>	+	.	+	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Stachys sylvatica</i>	.	.	.	.	+	+	.	.	.	.	.	.	.	.	+	.	+	+	.	.
<i>Ulmus glabra</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	+
<i>Viola reichenbachiana</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.
Other species																					
<i>Acer platanoides</i>	.	.	1	.	.	.	.	.	3	3	+	.	.	.	.	1	.	2	.	+
<i>Aegopodium podagraria</i>	1	+	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.
<i>Ajuga reptans</i>	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Alliaria petiolata</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
<i>Alnus incana</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Anemone nemorosa</i>	+	2	.	+	.	+	+	2	.	.	.	+	+	.	.	.	+	.	3	.	
<i>Angelica sylvestris</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Anthriscus sylvestris</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.
<i>Aruncus dioicus</i>	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Athyrium distentifolium</i>	.	.	.	.	.	.	.	.	.	.	.	1	2	.	.	.	.	.	.	.
<i>Athyrium filix-femina</i>	2	1	+	2	+	2	1	1	1	+	+	.	1	.	+	+	+	+	.	1	
<i>Atropa bella-donna</i>	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Betula pendula</i>	.	.	3	.	.	.	.	.	.	.	.	2	.	1	.	.	.	.	.	.
<i>Calamagrostis arundinacea</i>	.	.	+	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Cardaminopsis arenosa</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Carex brizoides</i>	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Carex digitata</i>	.	.	.	.	.	.	.	.	+	+	+	.	.	.	.	.	.	.	.	.
<i>Carex pendula</i>	+	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
<i>Carpinus betulus</i>	1	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.
<i>Chrysosplenium alternifolium</i>	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Circaea alpina</i>	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Circaea lutetiana</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	+	.	.
<i>Corylus avellana</i>	.	.	.	.	1	.	.	+	+	+	.	.	.	.	+	.	.	.	.	.
<i>Doronicum austriacum</i>	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Dryopteris carthusiana</i>	.	.	.	+	+	.	+	+	.	+	.	.	.	.	.	.	.	.	.	.
<i>Elymus caninus</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Equisetum arvense</i>	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Euonymus europaea</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
<i>Fraxinus excelsior</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.
<i>Galeopsis speciosa</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.
<i>Galium intermedium</i>	.	.	.	.	+	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Geranium robertianum</i>	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.
<i>Geum urbanum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
<i>Glechoma hirsuta</i>	+	+	.	.	.	.	.	.	.	.	.	1	1	.	.	.	+	+	.	.
<i>Grossularia uva-crispa</i>	.	.	+	.	+	.	.	.	1	+	.	.	.	.	.	.	.	.	.	.
<i>Hieracium transilvanicum</i>	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Impatiens noli-tangere</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+	1	+	.	+
<i>Impatiens parviflora</i>	.	.	.	+	+	+	.	.	+	+	.	.	.	.	.	.	.	.	.	.
<i>Lamium maculatum</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
<i>Leucanthemum vulgare</i>	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Leucojum vernum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	.	.	.
<i>Lilium martagon</i>	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
<i>Lonicera xylosteum</i>	.	.	+	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Luzula pilosa</i>	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Luzula sylvatica</i>	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Majanthemum bifolium</i>	.	.	.	.	.	.	1	+	+	.	.	.	.	.	.	.	.	.	.	.
<i>Matteuccia struthiopteris</i>	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Melandrium dioicum</i>	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Moehringia trinervia</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	+	.
<i>Mycelis muralis</i>	.	.	.	.	.	.	.	+	+	.	.	.	.	.	+	+	+	.	.	.
<i>Myosotis sylvatica</i>	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Petasites albus</i>	+	.	.	.	1	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.
<i>Poa nemoralis</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Polypodium vulgare</i>	.	.	+	.	+	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.
<i>Polystichum braunii</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Ranunculus auricomus</i>	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Rosa pendulina</i>	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
<i>Rubus idaeus</i>	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Salix caprea</i>	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
<i>Salvia glutinosa</i>	+	+	.	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Sambucus racemosa</i>	.	.	+	+	.	.	.	.	+	.	.	1	1	.	.	.	.	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Mosses																				
<i>Atrichum undulatum</i>	+	.	.	.	-	-	-	-
<i>Bazzania trilobata</i>	+	.	.	.	-	-	-	-
<i>Brachythecium oedipodium</i>	.	+	-	-	-	-
<i>Brachythecium populeum</i>	+	-	-	-	-
<i>Brachythecium velutinum</i>	+	-	-	-	-
<i>Cirriphyllum piliferum</i>	+	-	-	-	-
<i>Dicranodontium denudatum</i>	+	.	.	-	-	-	-
<i>Eurhynchium angustirete</i>	.	.	+	.	+	.	.	1	+	.	.	-	-	-	-	.	.	.	.	.
<i>Hylocomium splendens</i>	-	-	-	-
<i>Hypnum cupressiforme</i>	+	1	.	-	-	-	-	.	.	.	.	.
<i>Isothecium alopecuroides</i>	.	.	+	1	+	-	-	-	-	.	.	.	.	.
<i>Paraleucobryum longifolium</i>	+	-	-	-	-
<i>Plagiomnium undulatum</i>	+	-	-	-	-
<i>Plagiothecium cavifolium</i>	+	-	-	-	-
<i>Plagiothecium laetum</i>	+	.	.	.	-	-	-	-
<i>Polytrichum formosum</i>	.	+	+	+	+	.	-	-	-	-
<i>Rhizomnium punctatum</i>	.	.	+	.	+	-	-	-	-
<i>Thuidium tamariscinum</i>	+	+	.	.	-	-	-	-

Syntaxa: 1 – *Symphyto cordati-Fagetum typicum*, 2 – *Symphyto cordati-Fagetum lunarietosum redivivae* var. *typicum*, 3 – *Symphyto cordati-Fagetum lunarietosum redivivae* var. *Phyllitis scolopendrium*, 4 – *Symphyto cordati-Fagetum corydaletosum cavae*.

- 1 – Onyshchenko V.A. (11.09.2005+15.05.2006), Zakarpatska Region, Tiachiv District, terrace of the Mala Uholka (Carpathian Biosphere Reserve);
- 2 – Onyshchenko V.A. (11.09.2005+15.05.2006), Zakarpatska Region, Tiachiv District, terrace of the Mala Uholka (Carpathian Biosphere Reserve);
- 3 – Onyshchenko V.A. (27.06.2002+15.05.2003), Ivano-Frankivsk Region, Karpatsky National Nature Park;
- 4 – Onyshchenko V.A. (27.06.2002), Ivano-Frankivsk Region, Karpatsky National Nature Park;
- 5 – Onyshchenko V.A. (30.06.2002), Ivano-Frankivsk Region, Karpatsky National Nature Park, near the Zhenets river;
- 6 – Onyshchenko V.A. (30.06.2002+15.05.2003), Ivano-Frankivsk Region, Karpatsky National Nature Park, near Mykulychyn village;
- 7 – Budjak V.V. (30.06.2002), Ivano-Frankivsk Region, Karpatsky National Nature Park, near near the Zhenets river;
- 8 – Onyshchenko V.A. (15.05.2003), Ivano-Frankivsk Region, Karpatsky National Nature Park, near Mykulychyn village;
- 9 – Onyshchenko V.A. (30.06.2002+15.05.2003), Ivano-Frankivsk Region, Karpatsky National Nature Park, near Yaremcha town;
- 10 – Onyshchenko V.A. (30.06.2002+15.05.2003), Ivano-Frankivsk Region, Karpatsky National Nature Park, near Yaremcha town;
- 11 – Onyshchenko V.A. (15.05.2003), Ivano-Frankivsk Region, Karpatsky National Nature Park, near Yaremcha town;
- 12 – Yakushenko D.M., Solomakha I.V. (01.08.2005), Ivano-Frankivsk Region, Nadvirna District, Gorgany Nature Reserve (Klimuk et al. 2006: 247-251, tab. 6.2.2, rel. 2);
- 13 – Yakushenko D.M., Solomakha I.V. (01.08.2005), Ivano-Frankivsk Region, Nadvirna District, Gorgany Nature Reserve (Klimuk et al. 2006: 247-251, tab. 6.2.2, rel. 3);
- 14 – Tokaryuk A.I. (04.08.2005), Ivano-Frankivsk Region, Gorgany Nature Reserve (Klimuk et al. 2006: 247-251, tab. 6.2.2, rel. 6);
- 15 – Chorney I.I. (09.09.2005+14.05.2006), Chernivtsi Region, Vyzhnytsky National Nature Park (Chorney et al. 2005: 172-174, tab. 5.2.12, rel. 6);
- 16 – Onyshchenko V.A. (10.09.2005+13.05.2006), Zakarpatska Region, Tiachiv District, Mala Uholka basin, Mt. Chertezh (Carpathian Biosphere Reserve);
- 17 – Onyshchenko V.A. (10.09.2005+13.05.2006), Zakarpatska Region, Tiachiv District, Mala Uholka basin, Mt. Chertezh (Carpathian Biosphere Reserve);
- 18 – Onyshchenko V.A. (12.09.2005+13.05.2006), Zakarpatska Region, Tiachiv District, Mala Uholka basin, Mt. Vezha (Carpathian Biosphere Reserve);
- 19 – Onyshchenko V.A. (12.05.2006), Zakarpatska Region, Tiachiv District, Mala Uholka basin, Mt. Pohar (Carpathian Biosphere Reserve);
- 20 – Onyshchenko V.A. (12.05.2006), Zakarpatska Region, Tiachiv District, Mala Uholka basin, Mt. Pohar (Carpathian Biosphere Reserve).

Table 31. Carpino-Fagetum Pauca 1941

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Exposition	E	NN W	S	NN W	W	NN W	NE E	E	NN E	SS E	S	SE E	SE E	N W	S	W	E	SW	
Inclination	15	20	7	40	2	10	10	10	4	40	5	25	25	20	30	10	7	30	
Tree layer	80	75	80	80	85	60	60	95	95	65	85	90	85	90	90	90	90	85	90
Shrub layer	0	0	0	3	0	3	4	0	2	15	0	0	0	3	3	2	0	0	10
Herb layer in summer relevé	5	0	20	2	20	50	4	1	1	5	15	3	5	15	25	10			
Herb layer in spring relevé	1	0	10	2	25	15	2	3	7	25	10	10	25	20	25	12	40	20	40
Mosses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Altitude	300	470	160	145	245	465	520	180	170	900	640	600	600	680	660	500	560	600	
Area (sq. m)	900	900	300	900	900	900	900	200		625	225	600	600	600	625	900	600	400	625
Number of species of vascular plants	13	16	19	22	13	31	22	10	17	32	13	18	16	21	17	21	15	8	22
Number of species of mosses										0	0	0	0	0	0	1	0	2	
Point number on Fig. 4	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3

D Carpino-Fagetum

Cephalanthera longifolia	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	+
Galium intermedium	.	.	.	+	+	+	.	.	+	+	.	.	.	.	.	+	.	.	.	.	+
Quercus petraea	.	.	+	+	2	1	2	4	.	.	.	.	.	.	.	.	.	.	.	.	.
Swida sanguinea	+	.	+	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Symphytum tuberosum s.l.	+	+	.	.	.	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.

Ch Symphyto cordati-fagenion

Dentaria glandulosa	2	2	2	2	2	+	.	.
Rubus hirtus	1	+	2	+	+	4	+	+	+	1	+	+	+	1	2	2	3	+	+	.	.	

Ch Fagetalia sylvaticae

Acer pseudoplatanus	.	+	.	1	.	1	.	.	.	+	+	+	1	1	1	+	+	.	+	.	
Anemone ranunculoides	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Asarum europaeum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Carex pilosa	1	+	2	+	+	3	+	.	+	.	.	.	.	.	2	.	.	.	.	.
Carex sylvatica	.	.	+	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.	+
Daphne mezereum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dentaria bulbifera	+	+	.	+	.	+	1	.	2	+	.	2	2	+	2	1	1	+	.	.	
Dryopteris filix-mas	.	+	.	+	.	+	.	.	+	.	.	+	+	+	.	+	.	.	+	.	
Epilobium montanum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Fagus sylvatica	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Galium odoratum	+	+	+	.	.	+	+	.	.	1	2	1	1	+	+	+	+	+	+	2	
Lamium galeobdolon	.	+	+	+	+	+	1	+	+	.	.	.	+	.	.	.	.	+	+	.	.
Lathyrus vernus	.	+	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mercurialis perennis	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	+	+	.	.	.	.
Milium effusum	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Phyllitis scolopendrium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
Polygonatum multiflorum	.	.	.	.	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pulmonaria obscura	.	.	.	+	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
Sanicula europaea	.	.	.	.	.	+	.	.	.	.	.	.	+	.	.	.	.	.	.	.	+
Scrophularia nodosa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Stachys sylvatica	.	.	+	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.
Ulmus glabra	.	+	.	.	.	+	.	.	.	.	.	.	.	.	+	+	+	.	.	.	.
Viola reichenbachiana	+	+	.	.	.	+	+	.	+	+	+	+	+	+	.	.	.	.	.	.	.

Other species

Acer campestre	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Acer platanoides	+	+	.	.	.	1	2	.	.	+	.	.	.	+	+	+	+	.	.	.	.
Ajuga reptans	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Alliaria petiolata	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Anemone nemorosa	.	.	.	.	2	1	+	1	.	3	.	.	.	.	.	2	.	.	.	.	.
Aruncus dioicus	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Athyrium distentifolium	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Athyrium filix-femina	.	.	.	.	.	.	.	.	.	+	+	.	+	+	.	.	+	+	.	.	.
Atropa bella-donna	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Carex digitata	.	+	+	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
Carpinus betulus	.	.	.	.	4	+	2	2	.	.	.	+	.	+	.	.	.	.	+	+	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
<i>Cerasus avium</i>	1	.	+	+	.	+	.	.	+	+	+	+	+	.	.	+	+	.	+
<i>Circaea alpina</i>	+	.	.	.
<i>Circaea lutetiana</i>	.	.	+	.	.	+	.	.	+	1	.	.	+	+	.	.	.	.	.
<i>Corylus avellana</i>	.	.	.	+	+	.	.	+	.	.	.	+	.	.
<i>Crataegus curvisepala</i>	.	.	.	+	+	.	.	+	+
<i>Cruciata glabra</i>	+
<i>Crocus heuffelianus</i>	+	+
<i>Dryopteris carthusiana</i>	.	.	+	+	.	.	.
<i>Epipactis atrorubens</i>	+
<i>Epipactis helleborine</i>	+	+	.	.	+
<i>Euphorbia amygdaloides</i>	+	.	.	+
<i>Fallopia dumetorum</i>	+
<i>Festuca drymeja</i>	2	.	.	.	.	.	.	.	.
<i>Fraxinus excelsior</i>	+	.	.	.	+	+
<i>Galeopsis speciosa</i>	+	.	+	.	.	.	+	.	.	.
<i>Geranium robertianum</i>	.	.	+	.	.	+	+	.	.	+
<i>Geum urbanum</i>	+
<i>Gymnocarpium dryopteris</i>	+	.	+	3	.	.
<i>Hedera helix</i>	.	+	+	1	.	.	.	1	+	.	.	.	.	+	1	.	.	.	.
<i>Helleborus purpurascens</i>	+
<i>Hepatica nobilis</i>	+
<i>Impatiens noli-tangere</i>	+
<i>Impatiens parviflora</i>	.	.	.	+
<i>Lilium martagon</i>	+
<i>Luzula luzuloides</i>	.	.	.	+	+	1	.
<i>Luzula pilosa</i>	.	.	+	+
<i>Melica nutans</i>	+
<i>Melittis carpatica</i>	+
<i>Moehringia trinervia</i>	+
<i>Mycelis muralis</i>	+	.	+	+	+	+	.	.	.	+	.	+
<i>Neottia nidus-avis</i>	.	+	+	+	.	.	.
<i>Oxalis acetosella</i>	+	+	+
<i>Pinus sylvestris</i>	1	.	.	.	.	.	.	.	.	.	.	.
<i>Poa nemoralis</i>	.	.	.	+
<i>Polystichum aculeatum</i>	+
<i>Prenanthes purpurea</i>	+	+	.	.
<i>Ranunculus cassubicus</i>	+
<i>Robinia pseudoacacia</i>	+
<i>Rubus idaeus</i>	+
<i>Salvia glutinosa</i>	+	.	+	.	+	+
<i>Sambucus nigra</i>	.	.	+	+	.	+	+	.	.	+	.	.	.	+	.	.	+	.	.
<i>Senecio ovatus</i>	+	.	.
<i>Solanum dulcamara</i>	+
<i>Sorbus aucuparia</i>	+
<i>Stellaria holostea</i>	+	+
<i>Swida sanguinea</i>	+
<i>Taraxacum officinale</i>	+
<i>Tilia cordata</i>	.	.	.	+
<i>Urtica dioica</i>	+	+	.	+	.	.	.
<i>Veronica officinalis</i>	+
<i>Vinca minor</i>	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Distribution of trees, shrubs and lianas by height																			
> 5.0 m																			
<i>Acer pseudoplatanus</i>	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Carpinus betulus</i>	4	.	2	2	.	.	.	.	.	.	1	.	.	.	.
<i>Cerasus avium</i>	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Fagus sylvatica</i>	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
<i>Pinus sylvestris</i>	1	.	.	.	.	.	.	.	.	.	.	.
<i>Quercus petraea</i>	2	1	2	4	.	.	.	.	.	.	.	.	.	.	.
0.5-5.0 m																			
<i>Acer campestre</i>	+
<i>Acer platanoides</i>	.	+	.	.	.	1	1	.	.	.	.	.	.	+	+	+	.	.	.
<i>Acer pseudoplatanus</i>	.	+	.	+	.	1	.	.	.	.	.	.	.	1	1	+	+	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
<i>Carpinus betulus</i>	+	.	.	+	-
<i>Cerasus avium</i>	+	.	+	.	.	+	+	.	.	.	-
<i>Corylus avellana</i>	.	.	.	+	+	+	.	-
<i>Fagus sylvatica</i>	.	+	+	1	.	+	.	+	1	3	+	+	+	1	2	1	+	+	-	
<i>Hedera helix</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	-
<i>Robinia pseudoacacia</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	-
<i>Rubus hirtus</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	-
<i>Sambucus nigra</i>	.	.	+	.	.	+	.	.	.	+	.	.	.	+	.	.	.	.	-
<i>Swida sanquinea</i>	+	.	+	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	-
<i>Tilia cordata</i>	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	-
<i>Ulmus glabra</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	.	-
< 0.5 m																				
<i>Acer campestre</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	-
<i>Acer platanoides</i>	+	+	.	.	.	+	2	.	.	+	.	.	+	+	+	.	+	.	-	
<i>Acer pseudoplatanus</i>	.	+	.	+	.	+	.	.	.	+	+	+	1	+	1	+	+	.	-	
<i>Carpinus betulus</i>	.	.	.	.	.	+	.	.	.	.	+	.	+	.	.	.	.	+	-
<i>Cerasus avium</i>	+	.	+	+	.	+	.	.	+	+	+	+	+	.	.	.	.	+	-
<i>Corylus avellana</i>	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	-
<i>Crataegus curvisepala</i> s.l.	.	.	.	+	+	.	.	+	.	.	.	.	.	.	.	.	.	.	-
<i>Fagus sylvatica</i>	1	.	+	+	+	+	.	.	+	+	.	1	+	.	+	+	+	3	-	
<i>Fraxinus excelsior</i>	.	.	.	.	.	.	.	.	.	+	.	.	.	+	+	.	.	.	-
<i>Hedera helix</i>	.	+	+	1	.	.	.	1	+	.	.	.	.	+	1	.	.	.	-
<i>Quercus petraea</i>	.	.	+	+	+	.	.	+	.	.	.	.	.	.	.	.	.	.	-
<i>Robinia pseudoacacia</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	-
<i>Rubus hirtus</i>	1	+	2	+	+	4	+	+	+	1	+	+	+	1	2	2	3	+	-	
<i>Rubus idaeus</i>	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	-
<i>Sambucus nigra</i>	.	.	.	+	.	.	+	.	.	+	.	.	.	.	.	.	.	+	-
<i>Sorbus aucuparia</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	-
<i>Swida sanquinea</i>	+	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	-
<i>Ulmus glabra</i>	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	-
Mosses																				
<i>Atrichum undulatum</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	
<i>Hypnum cupressiforme</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	
<i>Polytrichum formosum</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	-	.	-	

- 1 – Onyshchenko V.A. (23.08.2003+17.04.2004), Zakarpatska Region, Mukachevo District, Mt. Zhornyna, (Onyshchenko & Lukash. 2005: 164-169, tab. 2, rel. 16);
2 – Onyshchenko V.A. (23.08.2003+17.04.2004), Zakarpatska Region, Mukachevo District, Mt. Zhornyna, (Onyshchenko & Lukash. 2005: 164-169, tab. 2, rel. 17);
3 – Onyshchenko V.A. (24.08.2003+18.04.2004), Zakarpatska Region, Mukachevo District, east of Kolchyno, (Onyshchenko & Lukash. 2005: 164-169, tab. 2, rel. 18);
4 – Onyshchenko V.A. (24.08.2003+18.04.2004), Zakarpatska Region, Mukachevo District, east of Kolchyno, (Onyshchenko & Lukash. 2005: 164-169, tab. 2, rel. 15);
5 – Lukash O.V. (23.08.2003+17.04.2004), Zakarpatska Region, Mukachevo District, Mt. Zhornyna., (Onyshchenko & Lukash. 2005: 164-169, tab. 2, rel. 19);
6 – Lukash O.V. (23.08.2003+17.04.2004), Zakarpatska Region, Mukachevo District, Mt. Zhornyna., (Onyshchenko & Lukash. 2005: 164-169, tab. 2, rel. 20);
7 – Lukash O.V. (23.08.2003+17.04.2004), Zakarpatska Region, Mukachevo District, Mt. Zhornyna., (Onyshchenko & Lukash. 2005: 164-169, tab. 2, rel. 21);
8 – Lukash O.V. (24.08.2003+18.04.2004), Zakarpatska Region, Mukachevo District, east of Kolchyno, (Onyshchenko & Lukash. 2005: 164-169, tab. 2, rel. 22);
9 – Lukash O.V. (24.08.2003+18.04.2004), Zakarpatska Region, Mukachevo District, east of Kolchyno, (Onyshchenko & Lukash. 2005: 164-169, tab. 2, rel. 23);
10 – Onyshchenko V.A. (08.09.2005+12.05.2006), Zakarpatska Region, Tiachiv District, Mala Uholka basin, Mt. Pohar;
11 – Onyshchenko V.A. (08.09.2005+12.05.2006), Zakarpatska Region, Tiachiv District, Mala Uholka basin, Mt. Pohar;
12 – Onyshchenko V.A. (08.09.2005+12.05.2006), Zakarpatska Region, Tiachiv District, Mala Uholka basin;
13 – Onyshchenko V.A. (08.09.2005+12.05.2006), Zakarpatska Region, Tiachiv District, Mala Uholka basin;
14 – Onyshchenko V.A. (09.09.2005+14.05.2006), Zakarpatska Region, Tiachiv District, Mala Uholka basin, Mt. Chur;
15 – Onyshchenko V.A. (09.09.2005+14.05.2006), Zakarpatska Region, Tiachiv District, Mala Uholka basin, Mt. Chur;
16 – Onyshchenko V.A. (11.09.2005+15.05.2006), Zakarpatska Region, Tiachiv District, Mala Uholka basin;
17 – Onyshchenko V.A. (13.05.2006), Zakarpatska Region, Tiachiv District, Mala Uholka basin, sothern slope of Mt. Vezha;
18 – Onyshchenko V.A. (12.05.2006), Zakarpatska Region, Tiachiv District, Mala Uholka basin, lower part of southern slope of Mt. Pohar;
19 – Tokaryuk A.I. (19.05.2003), Chernivtsi Region, Storozhynets District, near Stari Broskivtsi.

Numer in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	27	28	
<i>Euonymus europaea</i>	.	+	.	+	+	.	.	+	.	.	+	1	1	.
<i>Frangula alnus</i>	+
<i>Galium mollugo</i>	+
<i>Galium verum</i>	+	.	+	+
<i>Geranium robertianum</i>	+	.	.	+
<i>Geum urbanum</i>	+
<i>Gymnocarpium dryopteris</i>	+
<i>Hepatica nobilis</i>	.	1	.	.	.	.	.	.	.	.	+	.	+	1	.	1	+	.	.	+	1	.	.	.	1	1	.	
<i>Huperzia selago</i>	+	+
<i>Hypericum perforatum</i>	+
<i>Impatiens parviflora</i>	.	.	.	+	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Lilium martagon</i>	.	.	.	+
<i>Luzula pilosa</i>	+	+	+	+	+	+
<i>Melittis sarmatica</i>	+
<i>Moehringia trinervia</i>	+	.	.	+	+	+
<i>Mycelis muralis</i>	.	.	+	+	+	.	+	+	+	+	+	.	.
<i>Neottia nidus-avis</i>	+
<i>Oxalis acetosella</i>	+	1	.
<i>Padus avium</i>	+
<i>Pinus sylvestris</i>	1	1	.	1	.	.	.	.	2	.	.	.	.	.	.	1	.	4	3	3	.	.	.
<i>Poa nemoralis</i>	+	+
<i>Polygonatum verticillatum</i>	+	2	1	+	.	.	.	.	.	.
<i>Pteridium aquilinum</i>	1
<i>Rosa caryophyllacea</i>	+
<i>Rubus idaeus</i>	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
<i>Sambucus racemosa</i>	1	1	.	1	.	.	.	.	.	.	.	.	+	+	+	.	+	1	.	1	1	.	.	+	1	2	+	
<i>Sorbus aucuparia</i>	.	+
<i>Swida sanguinea</i>	+
<i>Tilia cordata</i>	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Urtica dioica</i>	1	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Vaccinium myrtillus</i>	1
<i>Veronica chamaedrys</i>	+
<i>Veronica montana</i>	+
<i>Vincetoxicum</i>	+	+
<i>hirundinaria</i>
<i>Viola canina</i>	+	+
<i>Viola mirabilis</i>	+	+

Source of data: Tkachyk 1999: 117-188, tab. 13, rel. 1,4,5,8,9,10,12; Tkachyk 1999: 121-123, tab. 14, rel. 1-15; Tkachyk 1999: 125-126, tab. 15, rel. 1,5,6,9,10.

Location: Lviv Region, Roztochia Nature Reserve.

No data on date, area, exposition, inclination, layer and mosses.

Table 33. Subass. *Stellario holostea-Fagetum luzuletosum pilosae* Onyshchenko 2009 (point 3 on Fig. 5)

Number in table	1	2	3	4	5	6	7	8	9	10
Exposition	N	S	N	N	S	S	W	E	N	-
Inclination	30	20	30	10	15	25	35	40	25	0
Tree layer	90	90	90	90	85	90	90	80	85	80
Shrub layer in summer	2	4	5	10	5	3	15	12	5	10
Herb layer	4	2	3	2	55	35	65	50	13	33
Mosses	1	0	0	0	2	1	2	2	1	1
Area (sq. m)	450	700	600	600	550	450	400	250	600	1000
Number of species of vascular plants	29	26	30	29	38	17	31	36	29	42
Number of species of mosses	1	1	1	1	2	1	3	3	2	4
Nomenclatural type of subassociation				*						

D *Stellario holostea-Fagetum*

luzuletosum pilosae

<i>Dryopteris dilatata</i> + <i>D. expansa</i>	+	.	+	+	+	.	+	+	+	.
<i>Gymnocarpium dryopteris</i>	1	+	+	+	.	.	1	1	+	.
<i>Hieracium murorum</i> s.l. (<i>H. gentile</i>)	+	+	+	+	+	1	.	.	.	+

Number in table	1	2	3	4	5	6	7	8	9	10
Hieracium sabaudum s.l. (H. scabiosum)	.	+	+	.	.	+	.	.	.	+
Hieracium sp.	.	+	+	+	.	+	.	.	.	+
Huperzia selago	+	.	+	+	+	.	+	.	+	.
Luzula pilosa	+	+	+	+	.	1	1	1	.	+
Orthilia secunda	+	+	+	+	+	.	.	.	+	.
Pyrola minor	.	.	+	.	.	.	.	.	.	.
Solidago virgaurea	+	.	.	.	.	.	.	.	.	.
Vaccinium myrtillus	.	.	+	.	.	.	.	.	.	.
Veronica officinalis	+	+	+	+	.	.	+	1	.	.
D Stellario holosteae-Fagetum										
Aegopodium podagraria	.	.	.	.	.	.	.	2	.	.
Asarum europaeum	.	.	.	.	+	.	.	2	.	.
Dryopteris carthusiana	+	+	1	+	1	+	+	1	+	+
Euonymus verrucosa	.	.	.	.	.	.	.	1	.	.
Majanthemum bifolium	1	+	+	+	3	4	2	2	2	1
Quercus robur	.	.	.	.	.	.	.	1	1	.
Polygonatum multiflorum	.	+	+	+	+	+	.	+	+	.
Stellaria holostea	.	.	.	.	1	1	.	1	1	+
Ch Symphyto cordati-Fagenion										
Rubus hirtus	+	1	1	+	1	.	.	.	1	1
Ch Fagetalia sylvaticae										
Acer pseudoplatanus	+	+	.	1	1	1	1	1	2	1
Actaea spicata	.	.	.	.	.	.	.	1	.	.
Carex pilosa	+	.	.	.	4	.	2	.	.	.
Carex sylvatica	.	+	.	.	.	.	.	.	.	+
Dryopteris filix-mas	+	+	+	+	+	1	1	1	1	1
Epilobium montanum	.	.	.	.	.	.	.	.	.	+
Galium odoratum	+	+	+	+	2	.	1	1	.	+
Lamium galeobdolon	+	+	+	+	2	1	3	2	1	.
Lathyrus vernus	+	.	.	.	2	.	1	1	.	.
Milium effusum	.	.	.	.	.	.	.	.	.	+
Sanicula europaea	.	.	.	.	+	.	.	.	.	.
Scrophularia nodosa	+	.	.	.	+	.	+	.	.	+
Ulmus glabra	.	.	.	.	.	.	.	.	1	+
Viola reichenbachiana	.	+	+	+	1	.	1	.	.	+
Other species										
Acer campestre	.	.	.	.	+	.	.	.	.	.
Acer platanoides	.	.	.	+	.	.	+	1	1	1
Ajuga reptans	.	.	.	.	+	.	+	+	.	.
Anemone nemorosa	4	4	4	4	4	3	4	4	2	4
Aposeris foetida	+	.	.	+	+	+	1	1	.	.
Athyrium filix-femina	+	.	+	.	1	1	1	1	+	1
Betula pendula	.	1	1	.	.	.	.	.	1	.
Calamagrostis epigeios	.	.	.	.	.	.	.	.	.	+
Campanula persicifolia	.	.	.	.	+	.	.	.	.	.
Carex brizoides	.	.	.	.	.	.	.	.	.	4
Carex digitata	+	+	+	1	+	+	1	1	.	.
Carex remota	.	.	.	.	.	.	.	.	.	+
Carpinus betulus	.	1	.	.	.	.	.	1	1	.
Cerasus avium	.	.	.	.	.	.	1	.	1	.
Chamaerion angustifolium	.	.	.	.	.	.	.	.	.	+
Circaea lutetiana	.	.	.	.	+	.	.	.	.	+
Cystopteris fragilis	.	.	.	.	+	.	.	.	.	.
Equisetum sylvaticum	.	.	.	.	.	.	.	.	.	+
Euonymus europaea	.	.	.	.	.	.	.	.	.	+
Fagus sylvatica	5	5	5	5	5	5	5	5	5	5
Festuca gigantea	.	.	.	.	.	.	.	.	.	+
Frangula alnus	.	.	+	.	.	.	.	.	.	.
Fraxinus excelsior	.	.	.	.	.	.	.	.	1	.
Galeopsis pubescens	.	.	.	.	.	.	.	.	.	+
Galeopsis speciosa	.	.	.	.	.	.	.	.	.	+
Hedera helix	.	.	.	.	.	.	4	4	1	1
Hepatica nobilis	.	.	.	.	1	.	.	1	.	.
Hypericum maculatum	.	.	.	.	.	.	.	.	.	+
Hypopitys monotropa	.	.	.	.	.	.	.	.	+	+
Impatiens noli-tangere	.	.	.	.	.	.	.	.	.	+
Isopyrum thalictroides	.	.	.	.	+	.	+	+	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
<i>Lonicera xylosteum</i>	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.
<i>Luzula pilosa</i>	+	.	.	.	.	+	.	.	.	+	.	+	.	.	.	.	.	.	.	+	.	.	.	.	.	+
<i>Melica nutans</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	+
<i>Moehringia trinervia</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Mycelis muralis</i>	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Oxalis acetosella</i>	.	+	.	.	2	1	.	.	.	.	.	.	1	1	.	2	.	2	.	1	1	1	2	+	1	.
<i>Padus avium</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	+
<i>Picea abies</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	+	+	.	.	+
<i>Pinus sylvestris</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
<i>Platanthera chlorantha</i>	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Poa nemoralis</i>	+	+	+	.	+	+	.	.	+	+	.	.	+	.	.	+	+	+	.	.	.	.	+	+	+	+
<i>Polygonatum hirtum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Polystichum aculeatum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
<i>Populus tremula</i>	.	.	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Pulmonaria obscura</i>	.	+	+	1	+	+	.	.	+	1	.	+	+	+	+	.	1	+	1	.	+	+	1	+	1	+	
<i>Quercus petraea</i>	1	.
<i>Ranunculus lanuginosus</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	+
<i>Rubus caesius</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	+	.	.	.
<i>Rubus idaeus</i>	.	.	+	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.
<i>Sambucus nigra</i>	1	1	1	1	1	+	1	.	1	1	1	.	.	.	1	.	1	+	2	1	1	1	1	.	+	+	
<i>Sambucus racemosa</i>	+	.	.	.	.	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Sorbus aucuparia</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	+	.	.	+
<i>Staphylea pinnata</i>	.	.	.	.	.	.	1	.	.	1	.	+	.	.	.	.	.	.	.	2	.	.	.	1	.	.
<i>Stellaria nemorum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Swida sanguinea</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	1	1	.	.	+
<i>Tilia cordata</i>	.	+	+	1	.	1	.	.	1	2	1	1	.	.	1	1	1	.	2	.	.	.	.	1	.	+
<i>Urtica dioica</i>	.	.	.	+	+	.	.	.	.	.	.	.	.	+	+	.	.	.	+	.	+	+	.	.	.	+
<i>Veronica officinalis</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Viburnum opulus</i>	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Vinca minor</i>	.	.	.	.	.	.	5	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	2	.
Distribution of trees, shrubs and lianas by height																											
> 5.0 m																											
<i>Acer campestre</i>	2
<i>Acer platanoides</i>	1	1	1	.	.	.	.	2	.	.	1	1	.	.	.	.	.	.	2	.	.	.	.	.	2	1
<i>Acer pseudoplatanus</i>	.	1	1	.	.	.	.	.	1	.	1	.	.	.	.	.	1	1	2	1	2	2	.	.	2	1
<i>Alnus glutinosa</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	4	.	.	3	.
<i>Carpinus betulus</i>	1	.	.	.	4	1	.	.	.	.	1	1	.	1	1	3	3	3	2	1	2	2	1	3	2	1
<i>Fagus sylvatica</i>	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	5	5	5	4	5
<i>Pinus sylvestris</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
<i>Populus tremula</i>	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Quercus petraea</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
<i>Quercus robur</i>	.	.	.	.	.	1	.	.	1	.	1	1	.	.	.	1	.	.	1	.	.	.	.	.	.	.
<i>Tilia cordata</i>	.	.	.	1	.	1	.	.	1	2	1	1	.	.	1	1	1	.	2	.	.	.	.	1	.	
<i>Ulmus glabra</i>	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	1	.	1	.	.	.	.	1
0.5-5.0 m																											
<i>Acer campestre</i>	+	.	.	1	.	1	.
<i>Acer platanoides</i>	1	.	+	+	1	+	2	1	+	1	+	.	1	2	+	1	1	.	1	1	+	.	1	+	1	1	
<i>Acer pseudoplatanus</i>	1	.	1	1	1	1	.	1	1	1	+	+	1	2	1	.	1	1	1	1	1	1	1	+	1	1	
<i>Alnus glutinosa</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.
<i>Carpinus betulus</i>	+	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	+	.	1	.	+	+	.	.	.	.
<i>Cerasus avium</i>	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	+	+	.	.	.
<i>Corylus avellana</i>	1	+	+	+	1	.	+	+	1
<i>Crataegus curvisepala</i>	+	+	.	.	.	+
<i>Daphne mezereum</i>	1	+	+	.	.	+	1	1	.	.	.	+	+	1	.	1	+
<i>Euonymus europaea</i>	+	+	+	+	+	+
<i>Euonymus verrucosa</i>	.	.	+	.	.	+	1	.	+	.	+	+	.	1	.	.	.	1	.	.	.	+	+	+	1	+	1
<i>Fagus sylvatica</i>	2	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	.	.	1	2	1	2
<i>Frangula alnus</i>	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.
<i>Fraxinus excelsior</i>	.	.	.	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	+	+	.	.	.	.
<i>Lonicera xylosteum</i>	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.
<i>Padus avium</i>	+	+	.	.	+
<i>Picea abies</i>	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	+	+	.	.
<i>Populus tremula</i>	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Rubus caesius</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.
<i>Rubus hirtus</i>	+	+	+	.	.	.	1	.	1	2	+	+	.	1	2	.	.	.	2	.	+	+	+	1	1	1	1
<i>Rubus idaeus</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.
<i>Sambucus nigra</i>	1	1	1	1	1	+	1	.	1	1	1	.	.	.	1	.	1	.	2	1	1	1	1	.	+	+	

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
<i>Sambucus racemosa</i>	+	.	.	.	.	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Sorbus aucuparia</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	+	.	.	.	.
<i>Staphylea pinnata</i>	.	.	.	.	.	.	1	.	.	1	.	+	.	.	.	.	.	.	1	.	.	1	.	.	.	.
<i>Swida sanguinea</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	1	1	.	.	+	+
<i>Tilia cordata</i>	.	+	+	+	.	+	.	.	.	1	+	1	.	.	.	+	+	.	1	.	.	.	.	+	+
<i>Ulmus glabra</i>	1	.	.	.	.	+	.	.	.	+	+	.	1	.	.	+	+	1	.	1	1	.	.	1	+	
<i>Viburnum opulus</i>	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
< 0.5 m																											
<i>Acer campestre</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	+	.	+	.
<i>Acer platanoides</i>	+	1	1	+	1	1	1	1	+	+	1	+	1	1	+	1	+	.	+	+	+	.	1	+	+	1	
<i>Acer pseudoplatanus</i>	+	1	1	1	1	1	1	1	1	+	1	+	1	1	1	.	+	+	+	+	1	+	1	+	+	1	
<i>Carpinus betulus</i>	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Corylus avellana</i>	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	+	+	+	.	+	.
<i>Crataegus curvisepala</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	+
<i>Daphne mezereum</i>	+	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	+	+	.	+
<i>Euonymus europaea</i>	.	.	+	+	.	+	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	+	+	+	+	+
<i>Euonymus verrucosa</i>	+	.	+	.	.	+	.	.	+	+	.	+	.	+	.	.	.	.	+	.	.	+	+	+	+	+
<i>Fagus sylvatica</i>	1	1	1	1	1	1	1	1	1	1	1	+	1	1	1	1	+	1	1	+	.	.	1	1	+	1	
<i>Fraxinus excelsior</i>	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	+	+	.	.	.	.	+
<i>Grossularia uva-crispa</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
<i>Hedera helix</i>	1	.	2	4	3	.	2	3	2	5	3	3	4
<i>Picea abies</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	+	.	.	+
<i>Quercus robur</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Rubus caesius</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	+	.	.	.
<i>Rubus hirtus</i>	2	+	+	.	.	1	.	1	+	+	+	.	1	+	.	.	.	.	+	.	+	+	+	+	1	+
<i>Rubus idaeus</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Sambucus nigra</i>	+	+	+	+	+	.	+	.	+	+	+	.	.	.	.	+	.	+	+	1	1	1	1	+	+	+
<i>Sorbus aucuparia</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	.	+
<i>Swida sanguinea</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	+	.	.	+
<i>Ulmus glabra</i>	.	.	.	.	.	.	.	+	.	+	.	+	.	+	.	.	.	.	+	1	.	+	+	.	.	+
<i>Viburnum opulus</i>	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mosses																											
<i>Atrichum undulatum</i>	+	+	+	+	+	.	.	.	+	+	+	+	+	.	+	1	1	+	+	1	+
<i>Plagiomnium undulatum</i>	1	1	.	.	1
<i>Polytrichum formosum</i>	+	1	+	.	+	1	.	.	+	+	+	.	1	+	.	.	+	.	+	.	1	+	+	+	+	+	
<i>Rhizomnium punctatum</i>	+	+	1	1	.	.	1	.

Syntaxa: 1- *Stellario holosteae*-Fagetum typicum var. typicum, 2 – *Stellario holosteae*-Fagetum typicum var. *Sanicula europaea*.
 Author: V.M. Ralo.

Location: Verkhniobuzke Pasma (Lviv Region, Zolochiv and Brody Districts).

- 1 – 05.07.2003+22.05.2004, Derevyanky;
 2 – 17.07.2003+05.05.2003, Plisnysko;
 3 – 03.07.2003+22.05.2004, Derevyanky;
 4 – 29.06.2003+12.05.2004, Shcholop;
 5 – 11.07.2002+27.04.2003, Terasy;
 6 – 09.07.2002+17.05.2003, Syniokha;
 7 – 03.08.2003+29.04.2004, Sviata Hora;
 8 – 03.08.2003+29.04.2004, Sviata Hora;
 9 – 13.07.2003+05.05.2004, Monastyr;
 10 – 03.08.2003+29.04.2004, Sviata Hora;
 11 – 13.07.2003+05.05.2004, Monastyr;
 12 – 19.07.2002+23.04.2003, Zhulytska Hora;
 13 – 09.07.2002+17.05.2003, Syniokha;
 14 – 25.06.2003+03.05.2004, Khomets;
 15 – 07.07.2005+25.04.2005, Hromadsky Lis;
 16 – 01.08.2003+22.04.2004, Havaretska Hora;
 17 – 03.08.2003+29.04.2004, Sviata Hora;
 18 – 25.06.2003+03.05.2004, Khomets;
 19 – 05.08.2003+29.04.2004, Sviata Hora;
 20 – 12.07.2003+05.05.2004, Hutyshche;
 21 – 25.06.2003+03.05.2004, Khomets;
 22 – 12.07.2003+05.05.2004, Hutyshche;
 23 – 17.08.2002+28.04.2003, Rypynska Hora;
 24 – 06.07.2003+30.04.2004, Zozulivska Dolyna;
 25 – 25.06.2003+03.05.2004, Khomets;
 26 – 03.07.2003+22.05.2004, Derevyanky.

Table 35. Subass. *Stellario holostea*-*Fagetum corydaletosum cavae* (var. *Phegopteris connectilis*, var. *Viola mirabilis*) (point 3 on Fig. 5)

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Exposition	W	-	N W	N	E	W	N	N	N	N	S W	W	W	S	W	-	W	W	W	S	E	N	S	N
Inclination	30	0	20	2	35	20	35	25	10	25	18	15	2	2	35	0	1	8	35	30	1	2	30	20
Tree layer	75	85	90	80	80	90	80	80	75	90	90	90	80	85	75	85	90	85	85	75	85	85	90	85
Shrub layer	8	7	7	17	13	12	12	10	10	12	5	7	8	10	8	10	12	12	15	20	10	5	10	10
Herb layer in summer relevé	25	65	70	70	60	70	75	70	35	60	45	70	60	40	50	60	60	75	75	80	80	70	75	60
Mosses	2	1	0	0	3	1	1	1	2	0	2	0	0	1	0	1	2	2	0	3	0	0	0	0
Area (sq. m)	400	750	800	900	500	500	700	400	300	600	600	400	600	700	300	600	700	600	700		100	450	500	400
Number of species of vascular plants	38	68	70	77	53	62	47	48	73	40	54	46	53	71	45	59	52	51	40	43	45	48	46	29
Number of species of mosses	4	3	3	2	4	3	3	3	4	1	4	3	3	4	3	4	4	4	2	2	2	3	1	2
Syntaxon	1										2													

D var. *Phegopteris connectilis*

Luzula pilosa
Phegopteris connectilis
Huperzia selago

. + + + 1 + . +
+ + + . + + . . +
. + . . + + + .

D var. *Viola mirabilis*

Carex digitata
Campanula trachelium
Carex pilosa
Swida sanguinea
Viola mirabilis
Aposeris foetida
Melica nutans

+ + + + 1 + + + + . . . + + . + + + + + + + + .
. . . + . . + + + . + . + + + + + + + + . + + .
. 2 2 3 . 2 1 2 . . 1 . 3 . 1 . . . 2 . . . 4
. . . + + . . . + + + . 1 + + . + 1 . . + . 1 .
. + + + . . 1 1 . 1 1 + + 1 1 1 + + 1 1 . . 1 +
. + 1 + 1 1 1 + 1 + . 1 1 . . . + . .
. . . + . + + + . +

D *Stellario holostea*-*Fagetum corydaletosum cavae*

Anemone ranunculoides
Dentaria glandulosa
Ficaria verna
Gagea lutea
Geranium robertianum
Corydalis cava
Corydalis solida

1 + + . + 1 . . . 2 2 + 1 . 1 . 1 1 . 1 1 2 .
3 + 3 + 2 3 2 3 . 1 . . . 1 2 . 2 . 2 . 5 . +
+ + . . + . . . + . . . + . 1 . + . . + + .
+ + . + + + . . 1 . . . 1 . 1 1 1 . . . + + .
1 . + + + + 1 1 . + + + + . + + + + . + + .
+ 1 + . + + + 1 + 2 3 . 2 + 2 . 3 2 + + 2 1 +
+ 1 + . + + + 1 + 3 3 + 2 + 2 . 3 2 + 2 + 2 +

D *Stellario holostea*-*Fagetum*

Aegopodium podagraria
Asarum europaeum
Dryopteris carthusiana
Euonymus verrucosa
Majanthemum bifolium
Polygonatum multiflorum
Ranunculus cassubicus
Stellaria holostea

1 2 2 1 1 1 2 2 1 2 2 3 2 1 1 1 2 3 3 2 3 + 4 1
1 1 3 2 2 2 2 3 1 2 2 2 2 2 2 2 2 2 2 2 1 2 1
+ + 1 + 1 1 1 + + . . . + . . . 1 + + . 2
. 1 + 1 + 1 + 1 + + + . 1 + + + + + 1 1 + 1 .
. 1 2 1 2 1 . + . 1 1 . 1 1 . . 1 . 1 . . + . 2
. + + + + . . . + + + + + + + + + 1 1 . + + + +
. + + + . + 1 . + . + + + + . + + + . . + + .
. 1 1 1 1 1 1 + . . 1 1 + . . 1 1 . . . 3 + 1 +

Ch *Symphyto cordati*-*Fagenion***Ch *Fagetalia sylvaticae***

Acer pseudoplatanus
Actaea spicata
Adoxa moschatellina
Allium ursinum
Carex sylvatica
Daphne mezereum
Dryopteris filix-mas
Galium odoratum
Lamium galeobdolon
Lathyrus vernus
Mercurialis perennis
Milium effusum
Paris quadrifolia

3 1 1 2 1 1 1 3 2 2 2 + 2 3 3 3 3 4 1 1 1 2 1
. + + + . + 1 + + + . + + + 1 + + + + . + . + .
. . . . + + 1 . . . 1 1 + 1 + . . . + .
. +
. + + + + + + + . + . . + + + . . + + . + + +
. 1 + + + + + . + + . + + + . . + . + .
1 1 1 + 1 1 2 1 1 + 1 + . 1 1 1 . . . 1 1 1 + 3
1 2 2 2 1 2 2 2 2 2 2 2 2 2 1 1 2 1 2 1 2 + 2 3
2 2 2 2 2 3 3 3 2 2 2 2 2 2 1 2 2 2 3 2 2 1 2 2
. 1 2 1 1 1 2 1 + 2 1 1 1 1 . 2 1 1 1 2 1 + 1 1
. 2 . . 1 2 . . . 3 . . . 2 . 1
. + + + . + . . + . + . + + . + + . . . + . +
. + . + + + + + + + . . . + 1 . . + + .

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
<i>Sanicula europaea</i>	.	+	+	+	.	.	.	.	.	.	+	+	+	+	+	1	1	+	+	.	+	+	+	.
<i>Scrophularia nodosa</i>	.	.	+	+	.	+	+	+	+	+	+	+	+	+	.	+	+	+	+	+	+	+	+	.	
<i>Ulmus glabra</i>	3	+	+	+	+	1	2	+	2	1	1	1	1	1	2	1	1	1	.	2	1	+	1	.	
<i>Viola reichenbachiana</i>	.	+	1	+	1	+	1	+	+	1	1	1	+	1	+	1	1	+	1	.	1	+	1	1	
Other species																									
<i>Acer campestre</i>	.	+	.	.	.	.	.	.	.	.	.	1	1	.	.	.	2	1	.	.	.	.	.	.
<i>Acer platanoides</i>	2	+	1	2	+	1	2	1	2	2	2	2	2	+	2	2	2	1	2	2	1	1	+	1	2
<i>Ajuga reptans</i>	.	1	+	+	+	+	+	+	1	.	+	+	+	+	+	+	+	+	+	+	+	.	+	+	
<i>Alliaria petiolata</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
<i>Alnus glutinosa</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.
<i>Anemone nemorosa</i>	2	4	4	5	4	5	5	4	3	4	4	3	4	2	2	3	3	3	3	3	4	5	4	5	5
<i>Anthriscus nitida</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
<i>Aruncus dioicus</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
<i>Astragalus glycyphyllos</i>	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
<i>Athyrium filix-femina</i>	1	1	1	+	1	1	1	1	1	+	1	1	.	.	.	1	+	+	.	1
<i>Betula pendula</i>	.	.	1	+	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	.
<i>Brachypodium sylvaticum</i>	.	.	.	+	.	.	.	.	.	.	.	.	.	+	+	+	.	+	.	.	.	+	+	.
<i>Bromopsis benekenii</i>	.	+	.	+	.	.	.	.	.	.	.	.	.	+	.	.	+	+	.	.	.	.	.	.
<i>Carex spicata</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Carpinus betulus</i>	.	2	1	1	1	2	.	.	1	1	+	1	3	2	.	2	4	2	.	.	1	3	1	.	
<i>Cephalanthera damasonium</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
<i>Cerastium sylvaticum</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Cerasus avium</i>	.	1	.	+	.	.	.	.	.	.	.	.	.	.	1	.	+	1	.	.	.	.	+	.
<i>Chaerophyllum aromaticum</i>	.	.	.	.	.	.	.	.	+	.	+	.	.	.	+	+	+	.	1	.	.	.	.	.
<i>Chaerophyllum temulum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
<i>Chrysosplenium alternifolium</i>	.	+	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Circaea lutetiana</i>	+	.	.	+	+	+	.	+	+	+	+	+	.	+	.	+	.	.	.	.	.	.	.	.
<i>Corylus avellana</i>	.	+	+	1	+	+	.	+	+	+	+	.	1	+	1	.	+	1	.	.	.	+	+	.	
<i>Crataegus curvisepala</i>	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Dactylis glomerata</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
<i>Dryopteris dilatata</i>	+	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
<i>Dryopteris expansa</i>	+	+	+	.	+	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Epipactis helleborine</i>	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.
<i>Epipactis purpurata</i>	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Equisetum hyemale</i>	.	.	1	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Equisetum sylvaticum</i>	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Euonymus europaea</i>	.	1	+	+	+	+	+	.	+	+	+	.	+	+	+	+	+	+	+	.	+	+	+	.	
<i>Fagus sylvatica</i>	4	5	5	5	5	5	5	5	4	5	5	5	5	4	4	5	4	4	5	5	5	5	5	5	
<i>Festuca gigantea</i>	+	.	.	.	.	.	.	.	+	.	.	.	.	+	+	.	+	.	+	.	.	+	.	.
<i>Frangula alnus</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Fraxinus excelsior</i>	.	.	+	+	.	.	.	.	1	.	2	2	.	1	2	.	1	.	+	.	+	.	.	.
<i>Galanthus nivalis</i>	.	.	.	.	.	.	.	.	+	1	1	.	.	.	.	.	.	.	1	2	.	.	.	.
<i>Galeopsis pubescens</i>	.	.	+	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Geranium phaeum</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Geum urbanum</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	.	.	+	.	.
<i>Glechoma hederacea</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Grossularia uva-crispa</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Gymnocarpium dryopteris</i>	1	+	.	.	+	1	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Hedera helix</i>	2	3	4	4	4	4	4	4	1	4	.	4	4	1	1	.	.	.	2	3	4	.	.	1	
<i>Hepatica nobilis</i>	+	+	2	1	1	1	2	1	+	1	1	1	1	1	1	1	2	2	+	1	2	1	1	.	
<i>Hieracium gentile</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>(H. murorum s.l.)</i>	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
<i>Hieracium sp.</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Hordelymus europaeus</i>	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Hypopitys monotropa</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Impatiens noli-tangere</i>	1	.	+	.	+	+	+	+	+	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
<i>Isopyrum thalictroides</i>	+	1	+	+	+	+	+	+	1	+	1	1	1	+	1	+	1	1	1	1	+	+	1	+	+
<i>Lamium maculatum</i>	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	+	.	.	.	.
<i>Lapsana communis</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
<i>Lathraea squamaria</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Lathyrus niger</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
<i>Leucojum vernum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.
<i>Listera ovata</i>	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Lonicera xylosteum</i>	.	+	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
<i>Lysimachia nummularia</i>	.	.	+	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Melandrium dioicum</i>	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Moehringia trinervia</i>	.	.	.	+	+	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
<i>Mycelis muralis</i>	.	.	.	+	+	+	.	+	+	.	.	+	.	+	+	.	.	.	.	.	+	+	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
<i>Picea abies</i>	1	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
<i>Populus tremula</i>	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Rubus hirtus</i>	.	+	+	1	.	1	.	+	+	.	.	.	1	.	.	1	.	.	.	.	1	.	.	1	.
<i>Rubus idaeus</i>	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.
<i>Sambucus nigra</i>	+	+	1	1	1	1	.	1	1	1	+	1	.	1	1	1	1	1	1	1	2	1	1	1	.		
<i>Sambucus racemosa</i>	.	.	+	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Sorbus aucuparia</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
<i>Staphylea pinnata</i>	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
<i>Swida sanguinea</i>	.	.	.	+	+	.	.	.	+	+	+	.	1	+	+	.	+	1	.	.	.	.	.	1	.
<i>Tilia cordata</i>	.	.	.	+	.	+	.	.	+	.	1	+	+	+	.	+	+	.	.	.	.	.	.	.	+
<i>Ulmus glabra</i>	1	+	+	+	+	1	1	+	1	1	1	+	+	1	1	+	1	1	.	1	1	+	1	.	.		
<i>Viburnum opulus</i>	.	.	.	+	+	
< 0.5 m																											
<i>Acer campestre</i>	.	+	+	+	+	+	
<i>Acer platanoides</i>	1	+	1	1	+	+	1	+	1	1	+	+	+	+	+	1	+	1	1	1	1	+	+	+	1	.	
<i>Acer pseudoplatanus</i>	1	+	1	1	+	+	1	+	1	1	+	1	+	+	+	+	+	+	1	1	1	+	+	+	1	.	
<i>Carpinus betulus</i>	.	.	.	+	
<i>Corylus avellana</i>	.	.	.	+	+	.	+	.	.	.	+	+	+	.	
<i>Crataegus curvisepala</i>	.	.	.	+	
<i>Daphne mezereum</i>	.	+	.	+	+	+	
<i>Euonymus europaea</i>	.	+	+	+	+	+	.	+	+	+	.	+	+	+	+	+	+	+	+	+	.	+	+	+	.		
<i>Euonymus verrucosa</i>	.	+	+	+	+	+	+	+	+	+	.	+	+	+	+	+	+	.	+	+	+	+	+	+	.		
<i>Fagus sylvatica</i>	+	+	1	1	1	+	1	1	+	1	+	+	+	+	+	1	+	+	1	1	+	+	+	+	+		
<i>Fraxinus excelsior</i>	.	.	+	+	.	.	.	.	+	.	+	+	.	+	+	.	+	.	+	.	+	.	.	.	.
<i>Grossularia uva-crispa</i>	
<i>Hedera helix</i>	2	3	4	4	4	4	4	4	1	4	.	4	4	1	1	.	.	.	2	3	4	.	.	.	1		
<i>Picea abies</i>	+	+	.	+	
<i>Rubus hirtus</i>	.	+	+	.	.	.	.	.	+	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	1
<i>Rubus idaeus</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Sambucus nigra</i>	1	.	+	+	+	+	+	+	+	+	1	1	.	1	+	+	+	+	+	+	+	+	+	+	.		
<i>Sambucus racemosa</i>	.	.	+	
<i>Sorbus aucuparia</i>	.	+	+	
<i>Swida sanguinea</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	+	.	.	.	.	.	.
<i>Ulmus glabra</i>	1	+	+	+	+	+	1	+	+	+	+	+	+	+	+	+	+	+	+	.	1	+	.	+	.		
<i>Viburnum opulus</i>	+	
Mosses																											
<i>Atrichum undulatum</i>	+	+	+	+	+	+	+	+	+	.	+	+	+	+	+	+	+	+	+	+	.	+	+	+	+		
<i>Leucobryum glaucum</i>	
<i>Plagiomnium undulatum</i>	1	.	.	.	1	.	.	.	1	.	1	.	.	.	+	.	+	1	1	.	.	.	.	.	.
<i>Polytrichum formosum</i>	+	+	+	+	1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
<i>Rhizomnium punctatum</i>	1	+	+	.	1	+	+	+	1	.	+	+	+	+	+	+	+	1	1	.	.	.	.	+	.

Syntaxa: 1 – var. *Phegopteris connectilis*, 2 – var. *Viola mirabilis*.

Author: V.M. Ralo.

Location: Verkhniobuzke Pasma (Lviv Region, Zolochiv and Brody Districts).

1 – 13.07.2003+05.05.2004, Monastery;

2 – 01.08.2003+22.04.2004, Havaretska Hora;

3 – 10.07.2002+27.04.2003, Richky;

4 – 17.08.2002+28.04.2003, Rypynska Hora;

5 – 17.08.2002+28.04.2003, Rypynska Hora;

6 – 17.08.2002+28.04.2003, Rypynska Hora;

7 – 13.07.2003+05.05.2004, Monastery;

8 – 10.07.2002+27.04.2003, Richky;

9 – 17.07.2003+05.05.2003, Plisnysko;

10 – 03.08.2003+29.04.2004, Sviata Hora;

11 – 04.07.2003+22.05.2004, Derevyanky;

12 – 28.06.2003+04.05.2004, Shcholop;

13 – 17.08.2002+28.04.2003, Rypyn;

14 – 15.07.2005+25.04.2005, Hromadska Hora;

15 – 05.07.2002+02.05.2003, Dzvynets;

16 – 17.08.2002+28.04.2003, Rypynska Hora;

17 – 17.08.2002+28.04.2003, Rypynska Hora;

18 – 24.06.2005+03.05.2005, Hora Syniokha;

19 – 29.06.2003+12.05.2004, Kuptseva;

20 – 14.07.2003+06.05.2004, Pidhirtsi;

21 – 13.07.2005+15.05.2005, Horodysko;

22 – 10.07.2002+27.04.2003, Richky;

23 – 01.08.2003+22.04.2004, Pidlyska Hora;

24 – 03.07.2003+22.05.2004, Derevyanky.

Table 36. Subass. *Stellario holostea*-*Fagetum corydaletosum* *cavae* (var. *typicum* and var. *Arum alpinum*) (point 3 on Fig. 5)

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Exposition	N W	-	W	S	N	W	W	W	N	N	N	N	N	N	N	S	-	N	N	-	N	E	N	-	S	-	N	S	N
Inclination	3	0	25	2	30	15	10	40	40	25	15	1	20	10	10	12	0	20	5	0	5	2	2	0	15	0	25	15	25
Tree layer	90	90	85	90	70	85	75	80	90	90	90	90	85	80	85	85	90	80	80	80	85	90	90	90	85	90	85	90	85
Shrub layer	5	8	8	5	10	5	15	15	2	4	17	5	10	9	12	5	10	7	10	10	5	5	12	5	7	5	7	4	6
Herb layer in summer relevé	75	10	75	40	65	30	60	50	55	35	50	7	70	50	60	70	40	70	50	90	65	10	60	60	70	10	45	15	60
Mosses	0	0	0	1	2	0	1	1	0	0	0	1	0	0	0	0	1	1	3	3	2	1	1	1	0	1	0	1	0
Area (sq. m)	400	800	400	700	300	400	500	300	600	500	400	700	500	500	500	700	800	400	500	300	500	900	800	1000	800	800	800	1000	700
Number of species of vascular plants	33	38	36	36	45	30	34	25	21	32	30	31	45	29	32	40	42	31	45	43	37	49	43	46	46	42	43	51	42
Number of species of mosses	3	3	2	1	4	2	4	2	2	2	2	3	3	1	2	4	4	3	4	4	4	4	4	4	3	4	4	4	4
Nomenclatural type of subassociation										*																			
Syntaxon																													

D var. *Arum alpinum*

<i>Arum alpinum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Dentaria bulbifera</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Leucojum vernum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Carex brizoides</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

**D *Stellario holostea*-
*Fagetum corydaletosum***

<i>Dentaria glandulosa</i>	4	4	.	.	1	.	+	3	1	2	2	4	5	.	.	.	.	2	.	+	.	3	.	3	4	4	4	4	4	4
<i>Anemone ranunculoides</i>	+	+	1	.	1	.	+	3	+	+	+	1	+	.	.	2	1	1	1	.	1	1	2	1	1	2	2	3	2	2
<i>Ficaria verna</i>	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	1	1	2	1	+	.	+	+	+	1	1	.	.	.	.
<i>Gagea lutea</i>	+	+	.	.	.	.	+	+	.	+	.	1	+	.	.	+	1	+	1	.	+	1	1	+	+	1	+	1	+	+
<i>Geranium robertianum</i>	+	+	+	.	.	+	1	1	.	+	+	+	+	+	+	+	+	1	1	1	.	+	1	1	1	+	+	+	+	1
<i>Corydalis cava</i>	+	2	2	+	1	1	2	.	1	1	+	3	1	1	1	2	3	2	1	2	1	3	3	2	2	2	3	3	3	3
<i>Corydalis solida</i>	+	+	3	+	1	.	2	.	1	1	+	2	1	1	1	3	3	2	1	2	1	3	3	2	2	2	3	3	3	3

**D *Stellario holostea*-
*Fagetum***

<i>Aegopodium podagraria</i>	2	+	4	.	2	.	2	2	.	+	+	+	1	+	2	3	1	2	2	2	2	1	2	1	2	1	2	1	2	3	
<i>Asarum europaeum</i>	2	.	3	.	2	1	1	3	2	1	2	.	1	2	2	2	.	2	1	2	1	.	1	1	2	1	2	1	2	2	
<i>Dryopteris carthusiana</i>	.	+	.	1	.	.	.	.	+	+	+	1	+	.	.	.	1	1	.	.	1	+	+	+	+	.	.	+	1	1	
<i>Euonymus verrucosa</i>	+	+	.	.	1	+	.	.	+	+	+	.	+	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Majanthemum bifolium</i>	1	1	.	4	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2
<i>Quercus robur</i>	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Ranunculus cassubicus</i>	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	+	.	.	+	1	.	.	.	.	+	+	+	+	1	
<i>Stellaria holostea</i>	1	+	2	.	.	.	.	.	.	.	.	.	.	.	+	1	2	2	.	.	1	.	.	.	.	2	2	1	1	+	.

Ch *Fagetalia sylvaticae*

<i>Acer pseudoplatanus</i>	+	1	1	1	2	2	3	1	+	1	2	1	1	1	1	2	2	3	3	2	4	2	2	2	3	2	2	2	1		
<i>Actaea spicata</i>	.	.	.	.	1	.	+	1	+	+	.	+	.	+	+	.	+	+	+	+	+	+	.	.	+	+	+	.	1	1
<i>Adoxa moschatellina</i>	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	1	+	.	1	.	.	.	+	1	+	1	1
<i>Carex pilosa</i>	1
<i>Carex sylvatica</i>	.	.	+	+	+	+	.	.	.	+	+	+	+	.	+	+	1	+	+	+	.	+	+
<i>Dryopteris filix-mas</i>	1	1	+	1	1	.	1	1	1	1	1	1	1	1	+	1	1	1	1	1	1	1	1	1	1	1	1	+	1	+	1
<i>Fagus sylvatica</i>	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
<i>Galium odoratum</i>	1	1	2	1	2	1	3	3	1	1	1	+	1	1	2	3	2	2	2	2	2	1	1	2	2	2	1	1	+	2	
<i>Impatiens noli-tangere</i>	.	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	1	4	4	1	1	1	1	+	.	.	.	.	.
<i>Isopyrum thalictroides</i>	+	+	+	.	1	.	+	+	+	+	+	+	1	1	.	.	1	1	+	+	2	1	1	+	+	1	1	+	1	1	
<i>Lamium galeobdolon</i>	2	1	2	1	2	1	2	2	4	4	4	1	1	4	3	3	3	2	2	2	3	1	3	3	3	1	2	2	2	2	
<i>Lathyrus vernus</i>	1	.	1	.	1	.	1	1	1	1	+	+	+
<i>Mercurialis perennis</i>	.	.	+	1
<i>Milium effusum</i>	.	.	+	+
<i>Paris quadrifolia</i>	+	.	+	+	.	+	+	.	+	.	.	.	+	+	+	+	1	1	.	+	.	+	+	+	+	+	.	+	+	1	
<i>Polygonatum multiflorum</i>	+	.	+	+	1	1	.	2	+	.	.	.	.	+	+	+	1	1	.	.	.	+	+	+	+	1	+	1	+	+
<i>Sanicula europaea</i>
<i>Scrophularia nodosa</i>	.	+	.	+	+	+	+	.	.	.	.	.	+	+	.	.	+	+	.	.	+	.	+	+	+	+	.	+	.	.
<i>Ulmus glabra</i>	.	+	.	+	1	2	2	1	.	+	1	1	1	1	1	+	2	2	2	1	.	2	1	1	1	1	1	1	2	1	
<i>Viola reichenbachiana</i>	+	+	1	+	1	+	.	.	+	.	1	+	+	.	1	+	1	+	+	.	.	+	+	1	+	1	+	1	+	+	

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
Other species																													
<i>Acer campestre</i>	.	.	+
<i>Acer platanoides</i>	+	1	1	1	2	+	2	.	.	1	1	1	+	1	1	2	2	2	2	1	2	2	2	2	2	2	2	2	1
<i>Ajuga reptans</i>	+	.	.	+	1	1	.	.	.	.	.	.	.	.	.
<i>Alliaria petiolata</i>
<i>Alnus glutinosa</i>	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Anemone nemorosa</i>	4	3	4	4	3	2	3	2	4	4	4	4	3	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3
<i>Aruncus dioicus</i>	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Athyrium filix-femina</i>	1	+	1	.	.	.	.	1	1	+	1	+	+	+	1	1	1	1	1	1	1	+	1	+	1	+	+	+	.
<i>Betula pendula</i>	2	.	.	.	.	.	.	.	.	.	1	.	1	.
<i>Campanula latifolia</i>	+
<i>Campanula trachelium</i>	+
<i>Carex digitata</i>	.	.	+	1	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Carpinus betulus</i>	2	.	3	.	2	2	.	.	.	.	.	.	.	2	+	1	2	1	.	1	1	2	2	1	.	1	1	1	1
<i>Cerasus avium</i>	.	.	1	.	.	.	.	.	.	.	1	.	.	.	.	1	.	.	.	.	.	.	.	+	.	.	.	.	.
<i>Chaerophyllum temulum</i>	+	.	.	+
<i>Chamaerion angustifolium</i>	.	.	.	+
<i>Chelidonium majus</i>	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
<i>Chrysosplenium alternifolium</i>	+	+
<i>Circaea lutetiana</i>	1	.	.	.	.	.	.	.	+	+	+	+	.	.	+	+	+	+	.	+	.	+	+	+
<i>Corylus avellana</i>	+	+	1	1	.	+	+	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
<i>Daphne mezereum</i>	.	+	+	+	.
<i>Dryopteris dilatata</i>	+
<i>Dryopteris expansa</i>	.	.	.	+	+
<i>Euonymus europaea</i>	+	+	+	.	.	.	+	+	+	+	.	.	+	+	.	+	+	.
<i>Festuca gigantea</i>	+	+
<i>Frangula alnus</i>	.	.	.	+
<i>Fraxinus excelsior</i>	.	1	1	+	1	.	.	.	+	1	.	.	.	.	.	2	1	.	1	2	.	1	2	2	2	2	2	2	2
<i>Galanthus nivalis</i>	.	.	+	1	.
<i>Galeopsis pubescens</i>	.	.	.	+	+
<i>Galeopsis speciosa</i>	+
<i>Galium aparine</i>	+	.	.
<i>Geranium phaeum</i>	1	.	.	.	.	.	.	.
<i>Geum urbanum</i>	+	+
<i>Gymnocarpium dryopteris</i>	.	+	.	+	+	+	+
<i>Hedera helix</i>	.	.	.	3	2	.	4	1	1	+	.	1	.	1	.	1	.	.	.	4	2	.	.	.	.	1	2	1	.
<i>Hepatica nobilis</i>	1	.	1	.	.	+	.	.	.	1	.	+	1	1	1	.	.	.	.	.	1	.	.	.	.	.	.	.	+
<i>Impatiens parviflora</i>	.	+	.	+	+
<i>Lamium maculatum</i>	+	+	.	+
<i>Lapsana communis</i>	+	.	+
<i>Lathraea squamaria</i>	+	.
<i>Lonicera xylosteum</i>	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
<i>Melandrium dioicum</i>
<i>Moehringia trinervia</i>	.	.	.	+	+	+	+	+	+	.	.	.
<i>Mycelis muralis</i>	.	+	.	+	1	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Orthilia secunda</i>	.	.	.	+
<i>Oxalis acetosella</i>	.	+	1	+	1	.	1	.	.	.	2	1	+	.	.	1	.	.	.	1	.	2	1	1	1	.	.	.	
<i>Petasites albus</i>	2	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
<i>Picea abies</i>	1	.	.	1	1	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Pinus sylvestris</i>	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Platanthera chlorantha</i>	.	.	.	+
<i>Poa nemoralis</i>	+	+	+	+
<i>Polygonatum verticillatum</i>	.	+
<i>Polystichum aculeatum</i>	+	+	+
<i>Polystichum braunii</i>
<i>Populus tremula</i>	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
<i>Pulmonaria obscura</i>	+	+	1	.	1	1	1	1	+	1	+	.	+	+	1	1	1	+	+	1	1	+	1	1	1	+	1	+	+
<i>Quercus petraea</i>	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Ranunculus lanuginosus</i>	1	.	.	.	.	.	.	.
<i>Rubus hirtus</i>	.	1	.	1	.	.	.	.	.	2	1	1	.	.	.	.	.	+	.	1	1	.	+	1	+	.	.	.	+
<i>Rubus idaeus</i>	.	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Salvia glutinosa</i>	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
<i>Sambucus nigra</i>	+	1	1	1	1	.	1	.	1	1	1	1	.	1	1	1	1	1	1	1	1	1	2	1	1	1	+	1	1
<i>Sambucus racemosa</i>	+
<i>Senecio ovatus</i>
<i>Sorbus aucuparia</i>	+
<i>Stachys sylvatica</i>	+	.	.	.	+	+	1	.	.	.	.	.	+	.	+	+	1	1	.	+	1	+	+	1	+	1	+	+	1

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
<i>Fraxinus excelsior</i>	.	+	.	+	+	.	.	.	+	+	+	.	.	+	.	+	+	+	+	+	+	+	+	
<i>Grossularia uva-crispa</i>	
<i>Hedera helix</i>	3	2	.	4	1	1	+	.	1	.	.	1	.	.	.	4	2	.	.	.	.	1	2	1	.	
<i>Populus tremula</i>	+	
<i>Rubus hirtus</i>	.	1	.	1	.	.	.	.	.	1	1	+	.	.	.	+	.	+	+	+	+	+	+	.	.	.	.	+	.
<i>Sambucus nigra</i>	+	1	+	1	+	.	.	+	.	+	+	+	+	.	+	1	1	1	1	+	+	1	+	+	1	+	+	+	+	+
<i>Sorbus aucuparia</i>	+	+	.
<i>Swida sanguinea</i>	.	+
<i>Ulmus glabra</i>	.	+	.	+	1	+	1	+	.	+	+	+	+	+	+	+	+	+	+	1	1	.	+	+	+	+	+	+	+	+
<i>Viburnum opulus</i>	+
Mosses																														
<i>Atrichum undulatum</i>	+	+	+	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
<i>Plagiomnium undulatum</i>	+	.	+	+	+	.	1	1	1	+	+	+	.	+	+	+	+
<i>Polytrichum formosum</i>	+	+	+	1	1	+	+	+	+	+	+	+	+	.	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
<i>Rhizomnium punctatum</i>	+	+	.	.	+	.	1	.	.	.	.	+	+	.	+	+	+	+	+	1	1	1	+	+	+	+	+	+	+	+

Syntaxa: 1 – *Stellario holostea*-*Fagetum corydaletosum cavae* var. *typicum*, 2 – *Stellario holostea*-*Fagetum corydaletosum cavae* var. *Arum alpinum*.

Author: V.M. Ralo.

Location: Verkhniobuzke Pasma (Lviv Region, Zolochiv and Brody Districts).

- 1 – 10.07.2002+27.04.2003, Richky;
2 – 11.07.2005+18.05.2005, Lysa Hora;
3 – 29.06.2003+04.05.2004, Shcholop;
4 – 11.07.2005+18.05.2005, Lysa Hora;
5 – 04.07.2003+22.05.2004, Derevyanky;
6 – 24.06.2005+03.05.2005, Hora Syniokha;
7 – 13.07.2003+05.05.2004, Monastyr;
8 – 09.07.2002+17.05.2003, Hora Syniokha;
9 – 28.06.2003+04.05.2004, Kuptseva;
10 – 11.07.2002+27.04.2003, Vezha;
11 – 25.06.2003+03.05.2004, Khomets;
12 – 09.07.2003+01.05.2004, valley of Vyatyna river near Opaky village;
13 – 25.06.2003+03.05.2004, Khomets;
14 – 03.08.2003+29.04.2004, Sviata Hora;
15 – 03.08.2003+29.04.2004, Sviata Hora;
16 – 24.06.2005+03.05.2005, Hora Syniokha;
17 – 05.07.2002+02.05.2003, Dzvinets;
18 – 08.07.2005+16.05.2005, Obertasova Hora;
19 – 08.07.2005+16.05.2005, Obertasova Hora;
20 – 13.07.2003+05.05.2004, Monastyr;
21 – 08.07.2005+16.05.2005, Obertasova Hora;
22 – 05.07.2002+02.05.2003, Dzvinets;
23 – 05.07.2002+02.05.2003, Dzvinets;
24 – 11.07.2005+18.05.2005, Lysa Hora (Ruda);
25 – 11.07.2005+18.05.2005, Lysa Hora (Ruda);
26 – 24.06.2005+03.05.2005, Hora Syniokha;
27 – 12.06.2004+02.05.2003, Tsympriyankova Dolyna;
28 – 17.06.2004+06.05.2004, Richky;
29 – 17.06.2004+06.05.2004, Vezha.

Table 37. *Stellario holostea*-*Fagetum Onyshchenko* 2009 (points 2, 4, 5 on Fig. 5)

Number in table	1	2	3	4	5	6	7	8	9	10	11
Exposition	SSE	-	N	SEE	NE	NNW	-	S	-	N	N
Inclination	25	0	3	3	7		0	5	0	1	5
Area (sq. m)	350	160	600	100	400	400	300	2500	2500	2500	2500
Tree layer	90	90	90	70	85	85	82	80	95	70	87
Shrub layer	0	25	0	5	0	3	0	0	5	10	5
Herb layer in summer relevé	10		3	25	17	30	65	25	10	20	12
Herb layer in spring relevé	20	70	25	25	10	35	70	90	7	5	10
Mosses	0	0	0	0	0	0	0	0	0	0	0
Number of species of vascular plants	27	35	21	17	14	17	25	28	22	37	31

Number in table	1	2	3	4	5	6	7	8	9	10	11
Epipactis purpurata	+
Euonymus europaea	+	+	+	.	.	+
Fraxinus excelsior	+	.	+	.	2	.	1
Galeopsis bifida	+
Galium aparine	.	+
Galium intermedium	+
Geranium phaeum	+	.
Geum urbanum	+	+
Glechoma hirsuta	+
Gymnocarpium dryopteris	.	.	+
Hedera helix	.	.	.	+	.	.	2	.	.	.	.
Hepatica nobilis	.	+
Hieracium murorum s.l.	.	.	+
Impatiens noli-tangere	+	+	3	+
Impatiens parviflora	.	.	+	.	+
Lonicera xylosteum	.	1	.	.	.	.	.	.	.	.	.
Melica nutans	+
Mycelis muralis	+	+
Neottia nidus-avis	+	.
Picea abies	.	1	.	.	.	.	.	.	1	.	+
Poa nemoralis	+	.
Polygonatum hirtum	.	+
Quercus borealis	.	.	1	.	.	.	.	.	.	.	.
Ranunculus cassubicus	.	+	+	.	+	.
Rubus hirtus	.	.	.	1	+	1	.	.	.	.	.
Salvia glutinosa	+	.	.	.
Sambucus ebulus	+	.
Sambucus nigra	.	.	+	.	+	.	+	.	+	+	2
Sanicula europaea	+	.
Scilla bifolia	.	2	.	.	.	.	.	.	.	.	.
Scrophularia nodosa	.	.	+	+	.
Sorbus aucuparia	.	.	+	.	.	+
Stachys sylvatica	+	+	+
Swida sanguinea	.	+
Symphytum tuberosum	.	+
Tilia cordata	+
Urtica dioica	.	.	.	+	+	+
Viburnum lantana	.	+
Vicia sepium	+
Vinca minor	.	.	.	+
Viola jagellonica	+	.	.
Viola mirabilis	+
Viola reichenbachiana	+	.	+	+	+	+
Distribution of trees, shrubs and lianas by height > 5.0 m											
Acer platanoides	4	.	.	.	.
Betula pendula	1	.	.	.
Carpinus betulus	.	3	.	3	.	.	4	3	.	.	.
Cerasus avium	.	3	.	.	.	.	.	1	.	.	.
Fagus sylvatica	5	4	5	4	5	5	4	4	5	5	5
Fraxinus excelsior	1
Hedera helix	.	.	.	+
Quercus borealis	.	.	1	.	.	.	.	.	.	.	.
Quercus robur	.	3	.	.	.	.	.	3	.	.	.
Ulmus glabra	1	.	.	.	.
0.5-5.0 m											
Abies alba	.	+
Acer campestre	.	+
Acer platanoides	.	.	.	+	.	1	+	.	.	.	.
Acer pseudoplatanus	.	.	.	+	.	+	.	.	+	.	.
Carpinus betulus	.	+	.	1	.	.	.	+	.	.	+
Cerasus avium	+	+
Corylus avellana	.	3	.	.	.	.	.	.	.	.	.
Euonymus verrucosa	+

Number in table	1	2	3	4	5	6	7	8	9	10	11
<i>Fagus sylvatica</i>	+	+	+	1	.	1	.	+	1	1	+
<i>Fraxinus excelsior</i>	+
<i>Hedera helix</i>	+
<i>Lonicera xylosteum</i>	.	1	.	.	.	.	.	.	.	.	.
<i>Picea abies</i>	.	1	.	.	.	.	.	.	1	.	+
<i>Rubus hirtus</i>	.	.	.	+
<i>Sambucus nigra</i>	+	.	.	.	2
<i>Sorbus aucuparia</i>	+
<i>Swida sanguinea</i>	.	+
<i>Viburnum lantana</i>	.	+
< 0.5 m											
<i>Acer campestre</i>	+	+
<i>Acer platanoides</i>	+	+	.	+	+	+	+	+	+	+	+
<i>Acer pseudoplatanus</i>	+	+	.	+	+	+	+	.	.	+	+
<i>Carpinus betulus</i>	.	.	.	+	+	.	+
<i>Cerasus avium</i>	+	+	+	+
<i>Corylus avellana</i>	+	+
<i>Crataegus curvisepala</i>	.	+
<i>Daphne mezereum</i>	+
<i>Euonymus europaea</i>	+	+	+	.	.	+
<i>Euonymus verrucosa</i>	+
<i>Fagus sylvatica</i>	+	.	.	+	2	1	+
<i>Fraxinus excelsior</i>	+	.	+	.	2	.	+
<i>Hedera helix</i>	.	.	.	+	.	.	2	.	.	.	.
<i>Quercus robur</i>	+
<i>Rubus hirtus</i>	.	.	.	1	+	1	.	.	.	.	.
<i>Sambucus nigra</i>	.	.	+	.	+	.	.	.	+	+	1
<i>Sorbus aucuparia</i>	.	.	+
<i>Tilia cordata</i>	+
<i>Ulmus glabra</i>	+	.	+
<i>Viburnum lantana</i>	.	+
Mosses											
<i>Dicranella heteromalla</i>	.	.	+	-	-	-	-
<i>Plagiothecium cavifolium</i>	+	-	-	-	-
<i>Polytrichum formosum</i>	.	.	+	.	+	+	.	-	-	-	-

Syntaxa: 1 – Stellario holosteae-Fagetum typicum, 2 – Stellario holosteae-Fagetum corydaletosum cavae.

Author: V.A. Onyshchenko.

1 – 27.08.2006+26.04.2007, Ivano-Frankivsk Region, Tysmenytsia District, landscape reserve “Kozakova Dolyna”;

2 – 26.04.2007, Ivano-Frankivsk Region, Tysmenytsia District, landscape reserve “Kozakova Dolyna”;

3 – 26.08.2006+25.04.2007, Lviv Region, landscape reserve “Hriada”;

5 – 26.08.2006+24.04.2007, Lviv Region, landscape reserve “Hriada”;

6 – 26.08.2006+25.04.2007, Lviv Region, landscape reserve “Hriada”;

7 – 26.08.2006+25.04.2007, Lviv Region, landscape reserve “Hriada”;

8 – 06.1995+05.05.1996, Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, sq. 30;

9 – 23.04.1997+07.1996, Ternopil Region, Husiatyn District, Medobory Nature Reserve, Viknianske forestry, sq. 42;

10 – 23.04.1997+09.08.1997, Ternopil Region, Husiatyn District, Medobory Nature Reserve, Viknianske forestry, sq. 32;

11 – 23.04.1997+09.08.1997, Ternopil Region, Husiatyn District, Medobory Nature Reserve, Viknianske forestry, sq. 28.

- 25 – 03.08.2003+29.04.2004, Sviata Hora;
 26 – 04.07.2003+22.05.2004, Derevianky;
 27 – 11.07.2004+25.04.2004, Hora Storozhykha;
 28 – 05 .08.2003+29.04.2004, Sviata Hora;
 29 – 03.06.2004+23.04.2003, Zhulytska Hora;
 30 – 03.06.2004+23.04.2003, Zhulytska Hora;
 31 – 03.06.2004+23.04.2003, Zhulytska Hora;
 32 – 01.08.2003+22.04.2004, Havaretska Hora.

Table 39. Subass. *Euonymo verrucosae*-*Fagetum corydaletosum solidae* Onyshchenko 2009

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Exposition	SW	N	W	W	S	W	W	S	S	N	W	N	N	S	S	W	S	SW	N	W	N	SW
Inclination	20	30	30	2	20	30	25	10	25	25	10	30	35	5	1	30	25	35	35	30	1	35
Tree layer	90	90	90	80	90	85	90	85	90	90	90	90	80	90	80	85	90	85	70	80	80	85
Shrub layer	12	13	20	10	7	7	2	8	8	3	10	10	8	18	17	5	4	10	10	12	10	10
Herb layer in summer relevé	75	80	70	75	35	65	70	40	15	75	70	75	50	35	60	80	30	60	45	70	90	65
Mosses	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
Area (sq. m)	800	800	500	900	500	800	600	700	800	900	600	700	700	600	700	600	500	600	700	700	600	400
Number of vascular plants species	59	63	73	60	56	65	51	55	56	62	47	51	58	59	67	62	42	40	39	47	53	39
Nomenclatural type of subassociation														*								
Nomenclatural type of association														*								

D *Euonymo verrucosae*-*Fagetum corydaletosum*

Anemone ranunculoides	+	1	.	+	+	+	1	1	+	1	+	+	1	1	.	1	.	.	.	2	2	1
Corydalis cava	+	1	+	+	.	.	+	.	.	+	.	.	2	1	.	3	.	.	.	.	.	.
Corydalis solida	+	1	+	+	.	+	+	2	+	2	+	+	2	1	+	3	.	.	.	.	.	.
Dentaria glandulosa	2	3	+	4	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
Ficaria verna	.	.	.	.	.	.	+	.	.	.	.	1	.	.	+	1	+	.	.	.	.	.
Gagea lutea	.	+	.	.	.	.	+	.	.	.	.	1	1	.	1	.	.	.	.	.	.	.
Geranium robertianum	+	+	.	.	+	+	+	.	.	+	.	+	+	+	+	+	+	.	+	.	.	.
Isopyrum thalictroides	+	+	+	+	.	1	1	.	.	+	+	1	1	1	+	1	+	+	2	+	+	+

D *Euonymo verrucosae*-*Fagetum versus*

Cephalanthero-*Fagetum*

Astragalus glycyphyllos	.	.	+	.	.	+	.	+	.	.	.	.	.	+	+	+	.	.	.	+	+	.
Campanula persicifolia	.	.	+	.	+	+	.	+	.	.	+	.	+	.	.	+	.	.	+	.	.	+
Euonymus europaea	+	+	+	+	+	+	+	+	+	+	+	+	.	+	+	+	+	.	.	+	+	+
Euonymus verrucosa	1	1	1	1	1	1	+	+	+	+	+	+	+	1	1	+	+	.	+	1	1	1
Majanthemum bifolium	1	1	1	1	1	1	3	1	1	1	1	1	1	1	1	1	.	1	.	2	2	.
Platanthera chlorantha	+	+	+	+	.	.	.	+	.	.	.	+	+	+	+	.	.	.	.	.	.	.
Tilia cordata	.	1	+	.	1	1	.	1	1	1	1	1	1	2	1	.	1	2	.	.	+	.
Viola mirabilis	1	1	1	+	1	1	1	1	+	1	1	+	1	1	1	+	+	.	1	1	1	1

Ch, D Cephalanthero-*Fagenion* and *Quercetalia pubescentis*

Cephalanthera damasonium	+	+	+	+	+	+	+	+	+	+	+	+	.	+	+	.	+	+	.	+	+	+	
Cephalanthera rubra	+	+	+	+	+	+	.
Clematis recta	+
Convallaria majalis	.	+	1	.	.	1	.	1	.	+	1	1	1	+	1	.	.	.	2	.	.	1	
Cruciata glabra	.	.	+	.	.	+	.	+	+	.	.	.	.	.	+	.	.	.	.	+	+	.
Cypripedium calceolus	.	.	+	.	.	.	+	.	.	.	.	.	+	+	+	.	.	.	+	.	.	.
Lathyrus niger	.	.	+	.	+	.	.	+	.	.	.	.	.	.	+	.	.	.	.	.	.	.
Lilium martagon	.	+	+	.	+	.	.	+	+	+	+	+	.	.	+	.	+	.	.	.	.	+
Melittis sarmatica	.	.	+	+	.	.	+	.	+	.	.	.	+	+	+	.	.	.	.	.	.	.
Neottia nidus-avis	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Pyrethrum corymbosum	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Ch *Fagetalia sylvaticae*

Acer pseudoplatanus	1	2	2	2	1	1	1	1	1	2	1	1	3	3	3	3	2	3	4	2	2	2
Actaea spicata	+	+	1	+	.	+	+	+	+	+	+	+	+	+	1	+	+	+	1	1	1	+

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
<i>Hordelymus europaeus</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Hypopitys monotropa</i>	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Lamium maculatum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
<i>Listera ovata</i>	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Lonicera xylosteum</i>	.	.	.	+	.	.	.	+	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.
<i>Luzula pilosa</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Lysimachia nummularia</i>	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
<i>Melica nutans</i>	.	.	+	.	+	+	+	+	.	.	+	.	+	+	+	.	+	.	+	.	+	.	.
<i>Moehringia trinervia</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
<i>Mycelis muralis</i>	+	+	+	+	+	+	+	.	+	+	+	+	+	.	.	.	+	+	+	+	+	+	+
<i>Oxalis acetosella</i>	.	+	.	+	1	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Petasites albus</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Picea abies</i>	+	.	.	+	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	+	.	.	.
<i>Pinus sylvestris</i>	.	.	.	.	.	.	.	.	.	1	1	1	.	.	1	.	.	.	.	.	.	.	.
<i>Poa nemoralis</i>	+	+	+	+	+	+	+	+	+	+	+	.	+	+	+	+	+	+	+	+	1	1	+
<i>Polygonatum verticillatum</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Polystichum aculeatum</i>	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Populus tremula</i>	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Primula veris</i>	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Pteridium aquilinum</i>	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Quercus robur</i>	1	.	.	.	.	.	.	+	.	1	.	.	.	.	.	.	.	1	.	.	.	.	.
<i>Rhamnus cathartica</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Rosa dumalis</i>	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Rubus hirtus</i>	1	+	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Rubus idaeus</i>	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.
<i>Salvia glutinosa</i>	.	.	.	.	.	.	+	.	.	.	.	.	1	.	.	+	.	.	.	.	.	.	.
<i>Sambucus nigra</i>	1	1	1	1	.	.	+	.	.	1	1	2	1	1	.	+	1	.	.	1	+	+	.
<i>Sambucus racemosa</i>	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.
<i>Sorbus aucuparia</i>	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Staphylea pinnata</i>	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
<i>Stellaria holostea</i>	+	1	1	+	1	.	1	.	+	1	.	+	1	1	1	1	.	1	.	1	1	1	.
<i>Swida sanguinea</i>	+	+	1	+	1	1	+	+	+	+	+	.	1	1	1	+	.	+	1	1	1	1	
<i>Symphytum tuberosum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
<i>Urtica galeopsifolia</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
<i>Veronica chamaedrys</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	+	.	.	.
<i>Veronica officinalis</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Viburnum opulus</i>	+	.	+	.	.	.	.	+	.	+	+	.	+	.	.	.	.	.	.	.	+	+	.
<i>Vicia dumetorum</i>	.	.	+	.	.	.	.	.	.	+	.	.	+	.	.	.	+	.	+	.	.	.	.
<i>Vicia sylvatica</i>	.	.	+	.	+	+	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.

Distribution of trees, shrubs and lianas by height

> 5.0 m

<i>Acer campestre</i>	1	.	.	1	2	2
<i>Acer platanoides</i>	1	1	1	.	.	.	1	1	1	+	2	1	.	2	2	2	2	2	.	1	2	.	
<i>Acer pseudoplatanus</i>	1	1	1	1	.	1	1	1	1	2	1	1	3	3	3	3	2	3	4	1	2	2	
<i>Betula pendula</i>	1
<i>Carpinus betulus</i>	1	1	1	+	1	2	.	.	1	2	1	1	.	2	2	.	2	2	.	.	+	.	
<i>Cerasus avium</i>	1	1	.	.	1	1	.
<i>Fagus sylvatica</i>	5	5	5	5	5	5	5	5	5	5	5	5	4	4	5	5	5	5	4	5	5	5	
<i>Fraxinus excelsior</i>	.	.	.	.	.	2	1	2	1	1	2	.	.	.	.	.	2	.	.	.	1	.
<i>Pinus sylvestris</i>	.	.	.	.	.	.	.	.	.	1	1	1	.	.	1	.	.	.	.	.	.	.
<i>Populus tremula</i>	1
<i>Quercus robur</i>	1	1	1
<i>Tilia cordata</i>	.	1	.	.	1	1	.	1	1	1	1	1	1	2	1	.	1	2	.	.	.	.
<i>Ulmus glabra</i>	1	.	.	1	1	1	1	1	2	2	1	1	1

0.5-5.0 m

<i>Acer campestre</i>	.	.	.	.	1	+	.	+	.	.	.	.	.	1	1	+	.	.	.	.	.	.	.
<i>Acer platanoides</i>	1	1	2	.	1	1	+	1	1	+	+	1	1	1	1	1	1	1	1	1	1	1	+
<i>Acer pseudoplatanus</i>	1	1	2	1	1	+	+	1	1	+	+	1	1	1	1	1	1	1	1	1	1	1	1
<i>Carpinus betulus</i>	+	+	+	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	.	.	.	+	.
<i>Cerasus avium</i>	+	+	+	+	.	.	.	.	+	+	.	+	+	.	.	.	.	+	.	+	+	+	+
<i>Corylus avellana</i>	+	+	1	1	.	+	1	+	+	+	.	+	1	1	1	.	.	.	.	+	1	1	1
<i>Crataegus curvisepala</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+
<i>Daphne mezereum</i>	+	+	+	+	.	+	+	+	+	+	+	+	+	+	1	+	.	.	.	+	+	+	1
<i>Euonymus europaea</i>	+	+	+	+	.	+	.	+	+	+	.	.	.	.	+	+	+	+	.	.	+	+	.
<i>Euonymus verrucosa</i>	1	1	1	1	1	1	+	+	+	+	+	+	+	1	1	+	+	.	+	1	1	1	
<i>Fagus sylvatica</i>	1	2	2	2	1	1	+	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1
<i>Fraxinus excelsior</i>	.	+	.	.	+	.	.	+	+	.	.	.	+	.	.	.	.	+	.	+	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Lonicera xylosteum	.	.	.	+	.	.	.	+	.	.	.	.	+	.	+	.	.	.	.	.	.	.
Picea abies	+	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	+	.	.	.
Populus tremula	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Rosa dumalis	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Rubus hirtus	1	+	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Rubus idaeus	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.
Sambucus nigra	1	1	1	1	.	.	.	.	1	1	2	1	1	.	+	1	.	.	1	.	+	.
Sambucus racemosa	.	.	.	.	.	.	.	.	.	+	.	+	+	.	.	.	.	.	.	.	.	.
Sorbus aucuparia	.	.	+	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Staphylea pinnata	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
Swida sanguinea	+	+	1	+	1	1	+	+	+	.	+	.	1	1	1	+	.	+	1	1	1	1
Tilia cordata	.	+	+	.	.	+	.	.	+	+	+	+	+	+	1	.	+	+	.	.	+	.
Ulmus glabra	1	+	1	+	.	+	.	+	+	+	+	1	1	1	1	1	+	1	1	.	+	1
Viburnum opulus	+	.	+	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.
< 0.5 m																						
Acer campestre	.	.	.	.	+	+	.	+	.	.	.	.	.	+	+	+	.	.	.	.	.	.
Acer platanoides	1	1	1	1	1	+	+	1	+	1	1	+	1	1	1	1	1	+	+	1	1	1
Acer pseudoplatanus	1	1	1	1	1	+	+	+	+	+	+	+	1	1	1	1	+	+	+	1	1	1
Cerasus avium	.	.	.	.	.	.	+	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.
Corylus avellana	.	.	.	.	.	.	+	+	+	.	.	+	+	+	+	.	.	.	+	.	.	.
Crataegus curvisepala	+	+	.	+	.	+	.	+	+	+	.	.	.	.	+	.	.	.	.	+	+	.
Daphne mezereum	.	.	+	.	.	+	.	+	+	+	+	+	+	+	+	+	.	.	+	.	.	+
Euonymus europaea	+	+	+	+	+	+	+	+	+	+	+	.	.	+	+	+	+	.	.	+	+	+
Euonymus verrucosa	+	+	1	+	1	+	+	+	+	+	+	+	+	+	+	+	+	.	+	+	+	.
Fagus sylvatica	1	1	1	1	1	1	+	1	+	1	1	+	+	1	1	+	+	+	+	1	1	1
Fraxinus excelsior	.	+	.	+	+	.	+	+	+	+	+	+	.	+	+	+	.	+	+	.	+	+
Hedera helix	4	4	4	5	.	4	4	.	.	2	.	4	.	.	.	3	.	1	.	4	4	.
Picea abies	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.
Quercus robur	.	.	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.	+	.	.	.	.
Rubus hirtus	+	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Sambucus nigra	+	+	+	+	.	.	+	.	1	+	+	+	+	.	+	1	.	.	+	+	+	.
Sambucus racemosa	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Sorbus aucuparia	.	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Staphylea pinnata	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
Swida sanguinea	+	.	+	.	+	+	+	+	+	+	+	.	+	+	+	.	+	+	.	.	.	.
Ulmus glabra	+	+	+	+	.	+	.	+	+	+	+	+	+	1	+	+	+	+	+	+	+	1
Viburnum opulus	+	.	+	.	.	+	.	+	+	.	+	.	.	.	.	.	.	.	.	+	+	.
Mosses																						
Atrichum undulatum	+	+	.	+	+	+	+	.	.	+	.	+	+	+	+	+	+	+	+	.	+	.
Plagiomnium undulatum	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.
Polytrichum formosum	+	+	+	+	+	.	+	+	.	+	+	+	+	+	+	+	+	+	+	+	+	.
Rhizomnium punctatum	+	.	.	+	.	.	.	.	.	.	.	.	+	+	+	.	+	.	.	.	.	.

Author: V.M. Ralo.

Location: Verkhniobuzke Pasma (Lviv Region, Zolochiv and Brody Districts).

- 1 – 25.06.2003+03.05.2004, Khomets;
2 – 05.07.2002+02.05.2003, Tsympriyankova Dolyna;
3 – 05.07.2002+02.05.2003, Dzvinets;
4 – 17.08.2002+28.04.2003, Rypynska Hora;
5 – 07.07.2005+25.04.2005, Hromadsky Lis;
6 – 08.07.2005+16.05.2005, Obertasova Hora;
7 – 28.06.2003+12.05.2004, Shcholop;
8 – 09.07.2002+17.05.2003, Syniokha;
9 – 09.07.2002+17.05.2003, Hlodova;
10 – 13.07.2005+15.05.2005, Horodysko;
11 – 13.07.2005+15.05.2005, Horodysko;
12 – 08.07.2005+16.05.2005, Vosmashi;
13 – 17.07.2003+05.05.2003, Plisnysko;
14 – 24.06.2005+03.05.2005, Syniokha;
15 – 24.06.2005+03.05.2005, Syniokha;
16 – 28.06.2003+04.05.2004, Shcholop;
17 – 05.07.2002+02.05.2003, Dzvinets;
18 – 17.06.2004+06.05.2004, Terasy;
19 – 17.07.2003+05.05.2003, Plisnysko;
20 – 29.06.2003+04.05.2004, Kuptseva;
21 – 03.07.2003+22.05.2004, Koltkivska hora;
22 – 06.07.2003+30.04.2004, Zozulivska Dolyna.

Table 40. Sesli libanotidis-Fagetum Onyshchenko 2008 prov.

Number in table	1	2	3	4	5
Exposition	NNW	N	NW	SW	SW
Inclination	40	45	40	40	40
Altitude	670	700	690	690	690
Tree layer	85	90	85	80	85
Shrub layer	7	7	10	7	5
Herb layer in summer relevé	10	5	25	20	20
Herb layer in spring relevé	10	5	25	20	20
Mosses	2	0	0	1	0
Area (sq. m)	500	400	500	500	500
Number of vascular plants species	27	24	35	52	45
Syntaxa	1		2		

D Seseli libanotidis-Fagetum

Asplenium viride	+	+	+	.	.
Melittis carpatica	.	+	+	.	.
Moehringia muscosa	.	+	.	.	+
Rosa pendulina	1	+	+	+	.
Seseli libanotis	+	+	.	.	+
Taxus baccata	+	.	1	+	+
Tilia platyphyllos	1	.	4	+	+

D Seseli libanotis-Fagetum

**orthilietosum
secundae**

Majanthemum bifolium	+	.	+	.	.
Orthilia secunda	+	.	1	.	.
Vaccinium myrtillus	1	.	2	.	.
Valeriana tripteris	.	1	1	.	.

D Seseli libanotis-Fagetum

**vincetoxicetum
hirundinariae**

Asarum europaeum	.	.	.	+	+
Campanula persicifolia	.	.	.	.	+
Campanula trachelium	.	.	.	+	+
Corydalis cava	.	.	.	+	+
Corydalis solida	.	.	.	1	+
Cystopteris fragilis	.	.	.	+	+
Euphorbia cyparissias	.	.	.	+	.
Geranium robertianum	.	.	.	+	+
Geum urbanum	.	.	.	+	+
Glechoma hirsuta	.	.	.	+	+
Helleborus	.	.	.	+	+
purpurascens	.	.	.	.	.
Hylotelephium polonicum	.	.	.	+	+
Hypericum hirsutum	.	.	.	+	.
Phyllitis scolopendrium	.	.	.	1	2
Primula acaulis	.	.	.	+	+
Securigera elegans	.	.	.	+	.
Vincetoxicum	.	.	.	+	+
hirundinaria	.	.	.	.	.

**Ch Fagetalia
sylvaticae**

Acer pseudoplatanus	+	+	+	+	4
Anemone ranunculoides	.	.	.	+	.

Number in table	1	2	3	4	5
Dentaria bulbifera	.	.	.	1	+
Dryopteris filix-mas	+	+	+	+	+
Epilobium montanum	.	.	.	+	.
Galium odoratum	.	.	+	+	+
Impatiens noli-tangere	.	.	.	.	+
Mercurialis perennis	+	+	+	2	2
Polygonatum multiflorum	.	.	.	+	+
Ulmus glabra	.	+	.	+	1
D Quercu-Fagetea					
Acer platanoides	+	2	+	3	+
Corylus avellana	.	.	+	+	1
Euonymus europaea	.	.	.	2	.
Fraxinus excelsior	+	.	1	2	2
Poa nemoralis	.	.	.	.	+
Other species					
Alliaria petiolata	.	.	.	+	.
Asplenium ruta-muraria	.	.	+	.	.
Asplenium trichomanes	+	+	+	+	+
Athyrium filix-femina	.	+	.	.	.
Calamagrostis arundinacea	+	+	1	+	.
Cardaminopsis arenosa	+	.	+	+	+
Carex digitata	+	+	+	+	+
Carpinus betulus	.	.	.	+	+
Cephalanthera damasonium	+	.	.	.	.
Ctenidium molluscum	+	.	.	.	.
Dentaria glandulosa	.	+	.	.	.
Epipactis atrorubens	.	.	+	.	.
Epipactis helleborine	.	.	+	+	.
Fagus sylvatica	5	5	4	5	5
Fallopia dumetorum	.	.	.	+	.
Festuca drymeja	.	.	+	.	.
Galium album s.l.	.	.	+	+	.
Galium intermedium	1	+	1	+	+
Gymnocarpium dryopteris	1	.	.	.	.
Hedera helix	+	+	+	+	+
Hepatica nobilis	+	+	1	+	1
Luzula luzuloides	.	.	1	.	.
Luzula sylvatica	.	+	.	.	.
Melica nutans	.	.	+	+	+
Mycelis muralis	.	+	.	+	+
Polypodium vulgare	+	.	+	+	.
Polystichum aculeatum	+	.	+	+	1
Rubus hirtus	+	.	.	+	.
Rubus idaeus	.	.	.	.	+
Sambucus nigra	.	.	.	.	+
Solidago virgaurea	.	+	.	+	.
Sorbus aucuparia	+	+	+	+	+
Urtica dioica	.	.	.	.	+
Valeriana stolonifera	.	.	+	.	.
Distribution of trees, shrubs and lianas by height					
>5,0 m					
Acer platanoides	.	2	.	3	.
Acer pseudoplatanus	.	.	.	.	4
Fagus sylvatica	5	5	4	5	5
Fraxinus excelsior	.	.	1	2	2
Tilia platyphyllos	1	.	4	.	.
0,5-5,0 m					

Number in table	1	2	3	4	5
<i>Acer platanoides</i>	.	.	.	+	.
<i>Carpinus betulus</i>	.	.	.	+	.
<i>Corylus avellana</i>	.	.	.	+	1
<i>Euonymus europaea</i>	.	.	.	+	.
<i>Fagus sylvatica</i>	2	2	2	1	1
<i>Fraxinus excelsior</i>	+	.	+	+	.
<i>Rosa pendulina</i>	+	.	.	.	.
<i>Sorbus aucuparia</i>	+	.	+	.	+
<i>Taxus baccata</i>	+	.	1	.	.
<i>Ulmus glabra</i>	.	+	.	+	1
< 0.5 m					
<i>Acer platanoides</i>	+	+	+	+	+
<i>Acer pseudoplatanus</i>	+	+	+	+	+
<i>Carpinus betulus</i>	.	.	.	.	+
<i>Corylus avellana</i>	.	.	+	.	.
<i>Euonymus europaea</i>	.	.	.	2	.
<i>Fagus sylvatica</i>	+	+	+	+	.
<i>Fraxinus excelsior</i>	.	.	.	+	+
<i>Hedera helix</i>	+	+	+	+	+
<i>Rosa pendulina</i>	1	+	+	+	.
<i>Rubus hirtus</i>	+	.	.	+	.
<i>Rubus idaeus</i>	.	.	.	.	+
<i>Sambucus nigra</i>	.	.	.	.	+
<i>Sorbus aucuparia</i>	+	+	+	+	.
<i>Taxus baccata</i>	+	.	+	+	+
<i>Tilia platyphyllos</i>	.	.	.	+	+
<i>Ulmus glabra</i>	.	.	.	+	+
Mosses					
<i>Anomodon attenuatus</i>	.	.	.	.	+
<i>Brachythecium velutinum</i>	.	.	.	+	.
<i>Ctenidium molluscum</i>	+	.	.	.	.
<i>Dicranum scoparium</i>	+	.	+	.	.
<i>Eurhynchium striatum</i>	.	+	.	.	.
<i>Fissidens cristatus</i>	.	+	.	.	.
<i>Isoetecium alopecuroides</i>	+	.	+	.	.
<i>Plagiothecium cavifolium</i>	.	.	+	.	.
<i>Plagiothecium laetum</i>	.	+	.	.	.
<i>Polytrichum formosum</i>	.	.	+	1	.
<i>Rhizomnium punctatum</i>	+	.	.	.	.

Syntaxa: 1 – *Seseli libanotidis*-Fagetum orthilietosum secundae, 2 – *Seseli libanotidis* vincetoxicetosum hirundinariae.

Author: V.A. Onyshchenko.

Location: Mala Uholka Basin (Zakarpatska Region, Tiachiv District, Carpathian Biosphere Reserve, Uholka forestry, sq. 27).

Date: 09.09.2005+14.05.2005.

A.3. Dentario quinquefoliae-Fagion sylvaticae

Table 41. Lathyro aurei-Fagetum Borhidi 1962

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Mosses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Altitude	1300	1170	1160	1160	1160	1170	1170	1120	1090	800	510	400	450	310	800	900	755	750	750	710	800
Exposition		N	S W W	SE	N	N	W	S W	E		N W	N W	N W	NN W			W	S W	NN W	NE	
Inclination		20	15	10	25	25	25	30	40		25	20	22	12			5	7	12	35	
Tree layer	90	90	80	80	80	85	85	90	90	100	80	80	85	80	100	100	90	90	90	90	90
Brush layer	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0
Herb layer	60	2	20	7	3	20	10	5	20	50	5	6	10	2	20	80	1	15	2	1	5
Area (sq. m)		900	900	900	900	900	900	900	900		800	900	900								
Number of vascular plants species	14	32	22	17	20	23	20	29	32	25	37	33	27	32	24	27	12	25	19	22	17
Point number on Fig. 8		2	2	2	2	2	2	2	2		1	1	1	1			3	3	3	3	
Nomenclatural types of subassociations																*				*	
Syntaxa		1															2				

Ch, D Lathyro-aurei-Fagetum, Dentario quinquefoliae-Fagion

Dentaria quinquefolia	+	+	+	+	+	+	+	+	+	+	+	.	.	.	2	+	+	2	2	+	.
Galanthus plicatus	3	.	.	.	+	.	+	+	+	+	+	.	.	.	.	.	.	+	.	.	.
Polygonatum odoratum	+	+	+	+	1	+	+	+	1	+	+	.	+	.	+	+	+	+	1	+	+
Scilla bifolia	.	+	.	+	+	+	+	1	+	.	2	1	1	1	.	+	.	+	.	.	.

D subass. caricetosum digitatae

Carex digitata	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	.	.	+	+	+	+	+
Milium effusum	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.
Populus tremula	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	+	.	1	.
Tilia cordata	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	1	.

D subass. physospermetosum cornubiense

Acer campestre	.	+	+	.	.	.	.	+	+	+	1	+	1	+	+	+	.	.	.	.	.
Arum elongatum	+	+	+	.	+	+	+	+	+	.	+	+	+	+	+	.	.	+	.	.	.
Bromopsis benekenii	.	.	.	.	.	.	.	.	+	4	.	.	.	+	.	+	.	.	.	.	.
Euphorbia amygdaloides	.	+	+	+	+	1	+	+	+	.	+	+	+	+	+	+	.	.	.	.	.
Mercurialis perennis	4	+	3	+	+	1	2	2	1	2	.	.	.	.	.	3	.	.	.	.	.
Physospermum cornubiense	.	.	.	.	.	.	.	+	+	+	+	.	.	+	+	+	.	.	.	.	.
Primula acaulis	+	+	+	+	+	+	+	+	+	.	+	+	.	+	+	+	.	+	.	.	.
Ranunculus constantinopolitanus	+	.	.	.	.	+	+	.	.	.	+	.	.	+	.	.	.	.	.	.	.
Viola dehnhardtii	.	+	.	.	.	+	+	+	+	.	+	+	+	+	+	.	.	.	.	.	.

D var.

Dryopteris filix-mas	4	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
Anthriscus sylvestris	.	+	2	.	.	2	+	+	+	+	.	.	.	.	.	+	.	.	.	.	.
Crocus tauricus	.	+	+	+	.	+	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.
Geum urbanum	.	+	.	.	.	+	.	+	+	+	.	.	.	.	.	.	.	.	+	.	.
Lamium maculatum	+	+	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Mycelis muralis	.	+	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Sorbus aucuparia	.	+	+	+	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
Symphytum tauricum	.	.	.	+	+	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.
Aegonychon purpureocaeruleum	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	+	.	.	.	.	.
Cornus mas	.	.	.	.	.	.	.	.	.	.	.	+	+	.	+	+	.	.	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
<i>Carex cuspidata</i>	+	+	+
<i>Euonymus verrucosa</i>	+	+	+	+
<i>Hedera helix</i> s.l. (<i>H. taurica</i>)	1	1	2	+	2	.	.	.	.	.	.	2
<i>Ligustrum vulgare</i>	+	+	+	+
<i>Paeonia daurica</i>	+	.	+	+	+	+
<i>Quercus pubescens</i>	+	2	.	1	.	.	.	.	.	.	.	.
<i>Sorbus torminalis</i>	+	+	+	+	+
Ch Fagetalia																						
sylvaticae																						
<i>Epilobium montanum</i>	.	+
<i>Fagus sylvatica</i> ssp. <i>moesiaca</i>	5	5	5	5	5	5	5	5	5	5	5	4	5	4	5	5	5	5	5	5	5	5
<i>Galium odoratum</i>	+	+	2	1	+	.	+	+	+	+	.	.	.	.	.	4	.	+	+	+	+	+
<i>Pulmonaria obscura</i>	.	+	.	.	.	+	.	+
<i>Sanicula europaea</i>	+	+	+	.	.	+	.	.	.	+
<i>Viola reichenbachiana</i>	+	+
Other species																						
<i>Acer stevenii</i>	+
<i>Allium cyrillii</i>	+
<i>Anacamptis</i> <i>pyramidalis</i>	+
<i>Astragalus</i> <i>glycyphyllos</i>	+
<i>Betonica officinalis</i>	+
<i>Calamintha grandiflora</i>	.	+	+	.	.	.
<i>Carpinus betulus</i>	+	3	2	3	2	3	3	4	.	2	1	+	+	.
<i>Cephalanthera</i> <i>damasonium</i>	+	.	+	+	.	+	+	.	.	.	+	+	.	.
<i>Cephalanthera</i> <i>longifolia</i>	+	.	.	+	+	+	+	.	.	.	+
<i>Cephalanthera rubra</i>	+	+	.	+	+	+	.	+	.	.	+	+	+	+	.
<i>Cerasus avium</i>	1	+	.	+	.	.	.	.	.	.
<i>Chaerophyllum</i> <i>temulum</i>	.	+
<i>Clematis vitalba</i>	+	.	.	+
<i>Convallaria majalis</i>	+	+
<i>Corallorhiza trifida</i>	+	+	.	+	+	.	.	.
<i>Corydalis</i> <i>marschalliana</i>	+
<i>Corylus avellana</i>	+
<i>Crataegus curvisepala</i>	.	+	.	.	.	+	+	.	.	.	+
<i>Cystopteris fragilis</i>	+
<i>Dactylis glomerata</i>	.	.	+	+	.	+	+	+	.	.	+	+	.	.	.
<i>Epipactis helleborine</i>	+	.	.	+	+	.	.	.	+	+	.	.	.	+	+	+	+	.
<i>Epipactis microphylla</i>	+	+	+	.	.
<i>Euonymus europaea</i>	+	.	+
<i>Euonymus latifolia</i>	+	.	+	+	+	+
<i>Fragaria vesca</i>	.	+	+	.	.	+	+	+	.
<i>Fraxinus excelsior</i>	+	+	3	2	3	.	.	.	.	.	.	.	+	+
<i>Geranium robertianum</i>	.	+	.	.	+	.	.	.	+
<i>Hieracium gentile</i> (<i>H. murorum</i> s.l.)	+
<i>Humulus lupulus</i>	+	+
<i>Lapsana communis</i>	.	.	+	+	.	+	.	+	+	+	+	.	.	.
<i>Laser trilobum</i>	+
<i>Lathyrus aureus</i>	+	+	.	.	.	+	.	.	.	2	+	+
<i>Lathyrus laxiflorus</i>	+	.	.	+	+	+
<i>Limodorum abortivum</i>	+
<i>Listera ovata</i>	+
<i>Neottia nidus-avis</i>	+	+	+	+	+	.	+	+	+	.	+	+	+	+	.	+	+	.	+	+	+	
<i>Ophioglossum</i> <i>vulgatum</i>	+
<i>Orchis mascula</i>	+
<i>Orchis purpurea</i>	+
<i>Ornithogalum</i> <i>ponticum</i>	+
<i>Orthilia secunda</i>	+

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
Piptatherum virescens	+	+	
Platanthera chlorantha	.	+	.	+	+	.	.	+	+	.	+	+	+	+	+	+	+	+	+	+	.	
Poa longifolia	.	+	+	+	.	.
Poa nemoralis	.	1	+	.	.	+	.	.	.	+	.	.	.	.	.	+	+	1	+	+	+
Polygonatum hirtum	+	.	.	+	
Potentilla micrantha	+	
Primula sibthorpii	+	
Prunella vulgaris	+	.	.
Pyrola chlorantha	+
Quercus petraea	+	2	3	.	.	.	+	.	.	.	+	+	
Rosa sp.	.	+	+	+	.	+	+
Rubus sp.	+	.
Salvia glutinosa	+
Sambucus nigra	.	+	+
Saxifraga irriqua	+
Scutellaria altissima	+
Smyrnium perfoliatum
Swida sanquinea ssp. australis	+
Taraxacum officinale	+
Taxus baccata	+
Tilia begoniifolia	+	+
Ulmus glabra	+
Ulmus minor	+	+
Urtica dioica	+	.	+	.	.	+	.	.	+
Veronica umbrosa	+	+	.	.	.
Vincetoxicum scandens	+	+
Viola mirabilis	+
Viola odorata	+	+
Vitis sylvestris	+
Distribution of trees, shrubs and lianas by height																						
> 5.0 m																						
Acer campestre	-	1	.	1	.	-	-	.	.	.	.	-
Carpinus betulus	-	3	2	3	2	3	-	-	.	2	1	.	-	
Cerasus avium	-	1	.	-	-	.	.	.	.	-
Fagus sylvatica ssp. moesiaca	-	5	5	5	5	5	5	5	5	5	5	4	5	4	-	-	5	5	5	5	-	
Fraxinus excelsior	-	3	2	3	-	-	.	.	.	.	-
Hedera helix	-	+	.	.	-	-	-	
Populus tremula	-	-	-	2	.	.	1	-	
Quercus petraea	-	2	3	.	.	-	-	.	.	.	.	-
Quercus pubescens	-	2	.	1	-	-	.	.	.	.	-
Sorbus torminalis	-	+	.	.	-	-	-	
Tilia cordata	-	-	-	.	1	1	.	-	
0.5-5.0 m																						
Acer campestre	-	+	+	.	.	+	-	-	.	.	.	-	
Carpinus betulus	-	+	+	.	.	-	-	.	+	.	-	
Cerasus avium	-	+	-	-	.	.	.	-	
Cornus mas	-	+	+	.	+	-	-	.	.	.	-	
Corylus avellana	-	-	-	.	.	.	-	
Euonymus latifolia	-	+	.	+	-	-	.	.	.	-	
Euonymus verrucosa	-	+	-	-	.	.	.	-	
Fagus sylvatica ssp. moesiaca	-	1	1	+	.	1	+	.	+	.	+	+	+	.	-	-	.	+	+	+	-	
Hedera helix	-	+	+	+	-	-	.	.	.	-	
Milium effusum	-	+	-	-	.	.	.	-	
Populus tremula	-	-	-	.	+	.	-	
Primula acaulis	-	+	-	-	.	.	.	-	
Rosa sp.	-	+	-	-	.	.	.	-	
Sambucus nigra	-	+	+	-	-	.	.	.	-	
Swida sanquinea ssp. australis	-	+	.	.	.	-	-	.	.	.	-	
Taxus baccata	-	+	-	-	.	.	.	-	
Tilia cordata	-	-	-	.	+	+	1	-
Ulmus minor	-	+	.	.	-	-	.	.	.	-	

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
< 0.5 m																					
<i>Acer campestre</i>	-	.	+	+	+	+	+	+	+	+	-	-	-
<i>Acer stevenii</i>	-	-	-	-
<i>Carpinus betulus</i>	-	+	.	+	+	+	+	-	-	.	+	+	+	-
<i>Cerasus avium</i>	-	+	.	-	-	-
<i>Cornus mas</i>	-	+	-
<i>Crataegus curvisepala</i>	-	+	.	.	.	+	+	+	.	.	-	-	-
<i>Euonymus europaea</i>	-	+	.	-	-	.	.	.	-
<i>Euonymus latifolia</i>	-	+	.	+	+	.	-	-	-
<i>Euonymus verrucosa</i>	-	+	+	+	+	-	-	-
<i>Fagus sylvatica</i> ssp. <i>moesiaca</i>	-	+	+	1	.	+	+	+	+	.	+	+	1	+	-	-	1	+	+	+	-
<i>Fraxinus excelsior</i>	-	+	+	+	+	+	-	-	+
<i>Hedera helix</i>	-	1	1	2	+	-	-	.	.	.	-
<i>Ligustrum vulgare</i>	-	+	+	+	+	-	-	.	.	.	-
<i>Populus tremula</i>	-	-	-	.	+	.	+	-
<i>Quercus petraea</i>	-	+	+	+	.	.	-	-	+
<i>Quercus pubescens</i>	-	+	.	.	+	-	-	.	.	.	-
<i>Rosa</i> sp.	-	+	+	+	.	.	+	-	-	-
<i>Rubus</i> sp.	-	-	-	+
<i>Sorbus aucuparia</i>	-	+	+	+	+	+	-	-	-
<i>Sorbus torminalis</i>	-	+	+	+	+	-	-	.	.	.	-
<i>Swida sanquinea</i> ssp. <i>australis</i>	-	+	.	-	-	-
<i>Tilia cordata</i>	-	-	-	.	+	.	.	-
<i>Ulmus glabra</i>	-	+	-	-	-
<i>Ulmus minor</i>	-	+	.	-	-	.	.	.	-

Syntaxa: 1 – *Lathyro aurei-Fagetum physospermetosum cornubiensi*, 2 – *Lathyro aurei-Fagetum caricetosum digitatae*.

1 – (Didukh 1996: table 2, rel. 14);

2 – Onyshchenko V.A. (14.04.2004+20.06.2005), northern slope of the Main range near Ai-Petri Yaila;

3 – Onyshchenko V.A. (14.04.2004+20.06.2005), northern slope of the Main range near Ai-Petri Yaila;

4 – Onyshchenko V.A. (14.04.2004+20.06.2005), northern slope of the Main range near Ai-Petri Yaila;

5 – Onyshchenko V.A. (14.04.2004+20.06.2005), northern slope of the Main range near Ai-Petri Yaila;

6 – Onyshchenko V.A. (14.04.2004+20.06.2005), northern slope of the Main range near Ai-Petri Yaila;

7 – Onyshchenko V.A. (14.04.2004+20.06.2005), northern slope of the Main range near Ai-Petri Yaila;

8 – Onyshchenko V.A. (14.04.2004+20.06.2005), northern slope of the Main range near Ai-Petri Yaila;

9 – Onyshchenko V.A. (14.04.2004+20.06.2005), northern slope of the Main range near Ai-Petri Yaila;

10 – (Didukh 1996: table 2, rel. 23);

11 – Onyshchenko V.A. (13.04.2004+12.06.2004), southern environs of the Baidar Valley near Baidar Pass;

12 – Onyshchenko V.A. (13.04.2004+12.06.2004), southern environs of the Baidar Valley near Tylove village;

13 – Onyshchenko V.A. (13.04.2004+12.06.2004), southern environs of the Baidar Valley near Tylove village;

14 – Onyshchenko V.A. (13.04.2004+12.06.2004), southern environs of the Baidar Valley near Tylove village;

15 – (Didukh 1996: table 2, rel. 25);

16 – (Didukh 1996: table 2, rel. 22);

17 – Onyshchenko V.A. (15.04.2004+21.06.2005), Angarsky Pass;

18 – Onyshchenko V.A. (15.04.2004+21.06.2005), Angarsky Pass;

19 – Onyshchenko V.A. (15.04.2004+21.06.2005), Angarsky Pass;

20 – Onyshchenko V.A. (15.04.2004+21.06.2005), Angarsky Pass;

21 – (Didukh 1996: table 2, rel. 20).

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
<i>Swida sanguinea</i>	+	.	+	+	.	.	+	1	.	.	.	.	+	.	.	+	.
<i>Taraxacum officinale</i>	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
<i>Ulmus minor</i>	.	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
<i>Urtica dioica</i>	+	.	.	.	.	.	.	.	.	.	.	+	.	+	.	+	.
<i>Veronica chamaedrys</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.
<i>Viburnum opulus</i>	.	.	+	+	.	.	+	.	.	+	+	.	.	.	.	+	.
Distribution of trees and shrubs																	
by height																	
> 5.0 m																	
<i>Alnus glutinosa</i>	.	.	.	.	.	.	.	2	.	.	.	.	-	-	-	-	-
<i>Carpinus betulus</i>	5	5	4	4	5	5	5	2	5	5	5	4	-	-	-	-	-
<i>Fraxinus angustifolia</i>	.	.	.	4	.	.	.	4	.	+	1	.	-	-	-	-	-
<i>Populus tremula</i>	.	.	.	4	.	.	.	.	.	.	.	.	-	-	-	-	-
<i>Quercus robur</i>	4	4	4	.	4	.	4	3	5	5	1	5	-	-	-	-	-
<i>Tilia cordata</i>	1	2	2	.	1	.	.	+	.	.	1	.	-	-	-	-	-
0.5-5.0 m																	
<i>Acer campestre</i>	+	.	.	.	.	.	.	.	.	.	.	.	-	-	-	-	-
<i>Acer tataricum</i>	.	.	.	.	.	.	.	2	.	.	.	.	-	-	-	-	-
<i>Carpinus betulus</i>	.	.	+	1	.	.	.	2	+	+	.	.	-	-	-	-	-
<i>Cerasus avium</i>	.	.	+	.	+	+	.	.	.	.	.	.	-	-	-	-	-
<i>Corylus avellana</i>	.	+	.	.	.	.	+	+	.	+	.	.	-	-	-	-	-
<i>Crataegus curvisepala</i>	.	+	.	.	.	.	.	.	.	.	.	.	-	-	-	-	-
<i>Euonymus europaea</i>	.	.	.	1	.	.	.	1	.	.	.	.	-	-	-	-	-
<i>Fraxinus angustifolia</i>	.	.	.	.	.	.	.	.	.	.	.	.	-	-	-	-	-
<i>Hedera helix</i>	.	+	+	.	+	+	.	.	.	.	.	.	-	-	-	-	-
<i>Populus tremula</i>	.	.	.	+	.	.	.	.	.	.	.	.	-	-	-	-	-
<i>Rosa sp.</i>	.	.	.	.	+	.	.	.	.	.	.	.	-	-	-	-	-
<i>Sambucus nigra</i>	.	+	.	.	+	.	.	+	.	.	.	.	-	-	-	-	-
<i>Swida sanguinea</i>	+	.	+	+	.	.	+	+	.	.	.	.	-	-	-	-	-
<i>Tilia cordata</i>	.	+	+	.	+	.	+	+	+	.	.	.	-	-	-	-	-
< 0.5 m																	
<i>Acer campestre</i>	+	.	+	+	+	+	+	+	.	+	+	+	-	-	-	-	-
<i>Acer tataricum</i>	.	.	.	.	.	+	+	1	.	.	.	.	-	-	-	-	-
<i>Carpinus betulus</i>	+	.	+	1	+	+	+	2	+	+	+	.	-	-	-	-	-
<i>Cerasus avium</i>	+	+	.	.	+	+	+	.	.	.	+	+	-	-	-	-	-
<i>Corylus avellana</i>	+	+	.	.	.	.	+	.	+	+	.	.	-	-	-	-	-
<i>Crataegus curvisepala</i>	.	+	.	+	.	+	+	.	.	+	.	+	-	-	-	-	-
<i>Euonymus europaea</i>	+	+	+	1	+	+	+	2	+	+	+	+	-	-	-	-	-
<i>Fagus sylvatica</i>	.	.	+	.	.	.	.	.	.	.	.	.	-	-	-	-	-
<i>Fraxinus angustifolia</i>	.	.	.	.	.	.	.	.	.	.	.	.	-	-	-	-	-
<i>Hedera helix</i>	+	1	+	.	+	5	2	.	+	+	1	.	-	-	-	-	-
<i>Juglans regia</i>	+	+	.	.	.	.	.	.	.	.	.	.	-	-	-	-	-
<i>Populus alba</i>	.	.	.	.	.	.	.	+	.	.	.	.	-	-	-	-	-
<i>Populus tremula</i>	.	.	.	+	.	.	.	.	.	.	.	.	-	-	-	-	-
<i>Quercus borealis</i>	+	.	.	.	.	.	.	.	.	.	.	.	-	-	-	-	-
<i>Quercus robur</i>	+	.	.	.	+	.	.	.	+	.	.	.	-	-	-	-	-
<i>Ribes lucidum</i>	.	+	.	.	.	.	.	.	.	.	.	.	-	-	-	-	-
<i>Rubus caesius</i>	+	.	+	.	.	1	1	+	.	.	.	.	-	-	-	-	-
<i>Rubus hirtus</i>	+	1	1	.	1	+	1	.	2	+	.	.	-	-	-	-	-
<i>Sambucus nigra</i>	+	+	.	.	+	.	+	+	+	.	.	.	-	-	-	-	-
<i>Swida sanguinea</i>	+	.	+	+	.	.	+	1	.	.	.	.	-	-	-	-	-
<i>Tilia cordata</i>	.	+	.	.	+	.	+	.	.	.	.	.	-	-	-	-	-
<i>Ulmus glabra</i>	.	.	.	+	.	.	.	+	.	.	.	.	-	-	-	-	-
<i>Ulmus minor</i>	.	+	.	.	.	.	.	.	.	+	.	.	-	-	-	-	-
<i>Viburnum opulus</i>	.	.	+	+	.	.	+	.	.	+	+	.	-	-	-	-	-

1 – Onyshchenko V.A., Lukash O.V. (22.08.2003+18.04.2004), Zakarpatska Region, Mukachevo District (Onyshchenko & Lukash 2005: tab. 2., rel. 1);

2 -6 – Onyshchenko V.A. (22.08.2003+18.04.2004), Zakarpatska Region, Mukachevo District (Onyshchenko & Lukash 2005: tab. 2., rel. 2-6);

7-12 – Lukash O.V. (22.08.2003+18.04.2004), Zakarpatska Region, Mukachevo District (Onyshchenko & Lukash 2005: tab. 2., rel. 7-12);

13 – Tokaryuk A.I. (17.05.2005), Chernivtsi Region, Hertsa District, near Khratska;

14 – Tokaryuk A.I. (26.05.2002), Chernivtsi Region, Storozhynets District, near Hlybochok, Kurivske forestry;

15 – Tokaryuk A.I. (14.05.2002), Chernivtsi Region, Storozhynets District, near Hlybochok, Storozhytetske forestry;

16 – Tokaryuk A.I. (01.05.2003+22.06.2005), Chernivtsi Region, Storozhytets District, near Panka, Komarivske forestry, sq. 17, botanical reserve “Bilka”;

17 – Tokaryuk A.I. (14.05.2002), Chernivtsi Region, Storozhynets District, near Hlybochok, Storozhytetske forestry, sq. 32.

Table 43. Carici pilosae-Carpinetum Neuhausl et Neuhauslová 1964

Number in table	1	2	3	4	5	6	7	8	9	10
Exposition	E	SE	SWW	S	NE	SE	NWW	SWW	NE	NNW
Inclination	4	3	22	35	7	5	3	18	30	2
Altitude	265	290	535	160	260	290	210	250	140	200
Tree layer	80	60	80	70	60	45	55	90	30	40
Shrub layer	3	5	10	0	7	7	25	1	60	5
Herb layer in August	1	15	1	5	5	30	50	15	15	5
Herb layer in April	1	3	7	1	6	10	15	10	5	17
Mosses	1	0	0	0	0	0	0	0	0	0
Area (sq. m)	900	900	750	800	600	400	900	375	150	600
Number of vascular plants species	18	36	33	22	28	22	37	34	33	32
Point number on Fig. 10	2	2	2	2	2	2	2	2	2	2

D Carici pilosae-Carpinetum versus Tilio-Carpinetum, Isopyro-Carpinetum, Circaeocarpinetum

Cruciata glabra	.	+	.	.	.	+	+	+	+	.
Fagus sylvatica	+	.	+	+	.	.	1	+	.	.
Galium intermedium	.	.	.	+	.	+	+	+	+	+
Hieracium sp.	.	+	.	+	.	+	.	+	+	+
Ligustrum vulgare	.	.	.	+	+	+	+	+	+	.
Luzula luzuloides	+	+	.	.	.	+	+	.	.	+
Melica uniflora	.	+	.	.	.	.	.	.	+	.
Poa nemoralis	.	+	.	2	.	+	+	+	1	+
Symphytum tuberosum (S. besseranum)	+	+	+	+	+	+	+	+	.	+
Quercus petraea	4	5	2	4	5	4	5	2	.	4

Ch Carpinion

Carpinus betulus	5	1	5	4	4	2	2	5	.	4
Cerasus avium	+	+	.	+	+	1	1	+	4	2
Stellaria holostea	.	+	+	+	+	.	+	+	.	+
Tilia cordata	.	.	.	.	+	.	.	.	+	.

Ch Fagetalia sylvaticae

Acer pseudoplatanus	.	.	1	.	.	.	.	.	.	.
Actaea spicata	.	.	+	.	.	.	.	.	.	.
Anemone ranunculoides	.	.	+	.	.	.	.	.	.	.
Asarum europaeum	.	.	.	.	.	.	.	+	.	.
Carex pilosa	+	1	+	.	+	1	1	2	.	1
Carex sylvatica	.	.	.	.	+	.	+	.	.	.
Corydalis solida	.	.	.	.	.	.	.	.	+	.
Dentaria bulbifera	.	.	1	+	.	.	+	+	.	.
Dryopteris filix-mas	.	+	+	.	.	.	+	.	+	+
Epilobium montanum	.	.	.	.	.	.	.	.	+	.
Euphorbia amygdaloides	.	.	.	.	.	.	+	+	+	.
Ficaria verna	.	+	.	+	1	.	+	.	.	.
Galium odoratum	.	+	+	.	.	+	.	.	.	.
Isopyrum thalictroides	.	.	+	.	.	.	.	+	.	.
Lamium galeobdolon	+	.	+	.	.	.	.	+	.	+
Lathyrus vernus	.	.	+	.	.	.	.	+	.	.
Mercurialis perennis	.	.	+	.	.	.	.	.	.	.
Milium effusum	.	.	+	.	.	+	.	.	.	.
Polygonatum multiflorum	+	+	+	+	+	+	.	.	.	+
Pulmonaria obscura	.	.	.	.	+	.	+	+	+	.
Sanicula europaea	.	.	.	.	+	.	.	.	.	.
Scrophularia nodosa	.	.	.	.	.	.	.	.	.	+
Stachys sylvatica	.	.	+	.	.	.	.	.	.	.
Viola reichenbachiana	.	+	.	+	+	.	.	+	+	+

Other species

Acer campestre	.	.	+	+	.	.	.	+	.	.
Acer platanoides	.	.	+	.	.	.	.	.	.	.
Acer tataricum	.	.	.	.	+	+	+	.	.	.
Aegopodium podagraria	.	.	+	.	.	.	.	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10
Agrostis capillaris	+	.	.	.
Ajuga reptans	.	+	.	.	+	.	+	.	.	+
Alliaria petiolata	.	.	+
Allium vineale	.	.	.	+
Alnus incana	+	.
Anemone nemorosa	1	1	+	.	2	.	3	+	.	3
Aposoeris foetida	+	.	.
Aruncus dioicus	+	.
Asplenium trichomanes	+	.
Athyrium distentifolium	+	.
Campanula trachelium	+	.
Cardaminopsis arenosa	+	.	.
Carex digitata	+	+	+	+
Carex montana	.	+
Cephalanthera longifolia	+	.	.	.
Chamaecytisus sp.	+
Corylus avellana	+	+	1	.	.	.	.	+	1	+
Crataegus curvisepala	+	+	.	+	+	+	+	+	.	+
Crocus heuffelianus	+	.	.	+
Cystopteris fragilis	+	.
Dactylis glomerata s.l.	.	+	.	+	.	+	+	+	.	.
Dryopteris carthusiana	+
Euonymus europaea	+
Fragaria vesca	+	.	+	.	.	+
Frangula alnus	.	1	.	.	+	+	2	.	.	+
Genista tinctoria	.	+	+	.	.	.
Geranium robertianum	.	.	+	+	.
Glechoma hirsuta	.	.	+	+	.	.
Hedera helix	+	1	.	+	+	2	+	.	+	+
Helleborus purpurascens	.	.	+
Hylotelephium polonicum	+	.
Juncus tenuis	.	+
Lathyrus niger	.	.	.	+
Luzula pilosa	+	+
Majanthemum bifolium	+	+
Malus sylvestris	+	+
Melampyrum nemorosum	.	+	.	+	.	.	.	+	.	+
Melittis melissophyllum	+	.	.
Mycelis muralis	+	.
Polypodium vulgare	+	.
Polystichum aculeatum	+	.
Potentilla erecta	+	.	.	.
Prunus spinosa	.	+
Pteridium aquilinum	.	+	+
Pyrus communis	+	+	.	.	.	+	+	.	.	.
Rosa sp.	.	+	.	.	+	.	.	+	+	.
Rubus hirtus	+	1	+	.	+	2	1	1	1	+
Salvia glutinosa	+	.
Sambucus nigra	.	.	1	.	.	.	.	.	.	.
Solidago virgaurea	.	+	+	.	+	.
Sorbus torminalis	+
Staphylea pinnata	.	+	2	.	.	.	.	.	.	.
Swida sanguinea	.	+	+	.	+	.	2	+	5	+
Urtica dioica	.	.	+
Veronica officinalis	+
Viburnum opulus	+	.	.	.
Vinca minor	4	.	.	+
Vincetoxicum hirundinaria	.	.	.	+
Distribution of trees and shrubs by height										
> 5.0 m										
Acer platanoides	.	.	+
Acer pseudoplatanus	.	.	1	.	.	.	.	.	.	.
Carpinus betulus	5	.	5	4	3	.	1	5	.	3
Cerasus avium	1	.	4	2
Corylus avellana	.	.	1	.	.	.	.	.	.	.
Fagus sylvatica	+	.	+	.	.	.	1	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10
<i>Quercus petraea</i>	4	5	2	4	5	4	5	2	.	4
<i>Tilia cordata</i>	.	.	.	.	+	.	.	.	.	.
0.5-5.0 m										
<i>Acer campestre</i>	.	.	+	+	.	.	.	+	.	.
<i>Acer platanoides</i>	.	.	+	.	.	.	.	.	.	.
<i>Acer pseudoplatanus</i>	.	.	+	.	.	.	.	.	.	.
<i>Acer tataricum</i>	.	.	.	.	+	.	.	.	.	.
<i>Carpinus betulus</i>	1	1	.	.	2	2	2	+	.	2
<i>Cerasus avium</i>	+	+	.	+	+	1	1	.	.	1
<i>Corylus avellana</i>	.	+	+	.	.	.	.	+	1	+
<i>Crataegus curvisepala</i>	+	+	.	+	.	+	+	+	.	+
<i>Fagus sylvatica</i>	+	.	+	.	.	.	+	.	.	.
<i>Frangula alnus</i>	.	1	.	.	.	.	2	.	.	+
<i>Hedera helix</i>	+	+	.	.	.	.	+	.	.	.
<i>Ligustrum vulgare</i>	.	.	.	.	.	+	+	+	+	.
<i>Prunus spinosa</i>	.	+	.	.	.	.	.	.	.	.
<i>Pyrus communis</i>	.	.	.	.	.	.	+	.	.	.
<i>Quercus petraea</i>	.	+	.	+	.	+	1	.	.	.
<i>Sambucus nigra</i>	.	.	1	.	.	.	.	.	.	.
<i>Sorbus torminalis</i>	.	.	.	.	.	.	.	.	.	+
<i>Staphylea pinnata</i>	.	+	2	.	.	.	.	.	.	.
<i>Swida sanquinea</i>	.	+	+	.	.	.	2	+	5	+
< 0.5 m										
<i>Acer campestre</i>	.	.	.	+	.	.	.	+	.	.
<i>Acer platanoides</i>	.	.	+	.	.	.	.	.	.	.
<i>Acer pseudoplatanus</i>	.	.	+	.	.	.	.	.	.	.
<i>Acer tataricum</i>	.	.	.	.	+	+	+	.	.	.
<i>Alnus incana</i>	.	.	.	.	.	.	.	.	+	.
<i>Carpinus betulus</i>	.	+	.	+	+	.	.	+	.	+
<i>Cerasus avium</i>	+	+	.	+	+	.	+	+	+	+
<i>Corylus avellana</i>	+	.	.	.	.	.	.	+	.	+
<i>Crataegus curvisepala</i>	.	+	.	+	+	.	+	+	.	+
<i>Euonymus europaea</i>	.	.	.	.	+	.	.	.	.	.
<i>Fagus sylvatica</i>	+	.	+	+	.	.	.	+	.	.
<i>Frangula alnus</i>	.	+	.	.	+	+	+	.	.	+
<i>Hedera helix</i>	+	1	.	+	+	2	+	.	+	+
<i>Ligustrum vulgare</i>	.	.	.	+	+	+	.	+	+	.
<i>Malus sylvestris</i>	.	.	.	.	+	+	.	.	.	.
<i>Pyrus communis</i>	+	+	.	.	.	+	.	.	.	.
<i>Quercus petraea</i>	+	2	+	+	2	1	2	1	.	1
<i>Rosa sp.</i>	.	+	.	.	+	.	.	+	+	.
<i>Rubus hirtus</i>	+	1	+	.	+	2	1	1	1	+
<i>Sambucus nigra</i>	.	.	+	.	.	.	.	.	.	.
<i>Staphylea pinnata</i>	.	.	+	.	.	.	.	.	.	.
<i>Swida sanquinea</i>	.	+	.	.	+	.	+	.	+	.
<i>Tilia cordata</i>	.	.	.	.	+	.	.	.	+	.
<i>Viburnum opulus</i>	.	.	.	.	.	.	+	.	.	.

Location: Zakarpatska Region, Mukachevo District.

- 1 – Onyshchenko V.A. (23.08.2003+16.04.2004), Mt. Zhornyna (Onyshchenko & Lukash 2005: tab. 3., rel. 1);
2 – Onyshchenko V.A. (23.08.2003+16.04.2004), Mt. Zhornyna (Onyshchenko & Lukash 2005: tab. 3., rel. 2);
3 – Onyshchenko V.A. (23.08.2003+16.04.2004), Mt. Zhornyna (Onyshchenko & Lukash 2005: tab. 3., rel. 3);
4 – Onyshchenko V.A. (24.08.2003+17.04.2004), east of Kolchyno (Onyshchenko & Lukash 2005: tab. 3., rel. 4);
5 – Lukash O.V. (23.08.2003+16.04.2004), Mt. Zhornyna (Onyshchenko & Lukash 2005: tab. 3., rel. 5);
6 – Lukash O.V. (23.08.2003+16.04.2004), Mt. Zhornyna (Onyshchenko & Lukash 2005: tab. 3., rel. 6);
7 – Onyshchenko V.A. (24.08.2003+17.04.2004), east of Kolchyno (Onyshchenko & Lukash 2005: tab. 3., rel. 7);
8 – Lukash O.V. (24.08.2003+17.04.2004), east of Kolchyno (Onyshchenko & Lukash 2005: tab. 3., rel. 8);
9 – Lukash O.V. (24.08.2003+17.04.2004), south of Kolchyno (Onyshchenko & Lukash 2005: tab. 3., rel. 9);
10 – Lukash O.V. (24.08.2003+17.04.2004), east of Kolchyno (Onyshchenko & Lukash 2005: tab. 3., rel. 10).

Table 44. Subass. Tilio-Carpinetum calamagrostietosum Traczyk 1962

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Exposition	-	-	-	-	-	-	-	-	-	-						
Inclination	0	0	0	0	0	0	0	0	0	0						

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Tree layer	90	85	80	80	85	75	70	80	80	85	90	80	90	80	80	90
Shrub layer	0	0	18	10	0	0	0	20	0	30	20	20	35	20	20	35
Herb layer in summer relevé	10	15	35	45	15	40	60	70	5	40	40	35	40	35	35	30
Herb layer in spring relevé	5	3			3		40	70	40							
Mosses	0	1	0	0	0	0	0	0	0	0						
Area (sq. m)	900	900	2500	2500	900	1500	2500	2500	2500	2500	625	625	625	625	625	625
Number of species of vascular plants	23	29	26	27	24	21	26	31	33	27	39	39	23	42	27	29
Point number on Fig. 11	12	12	12	12	12	12	12	14	14	14	22	22	22	22	22	22

D subass.**calamagrostietosum**

Calamagrostis arundinacea	+	+	1	2	+	+	.	2	1	.	.	1	1	+	.	.
Orthilia secunda	.	.	.	+	.	+	.	.	.	.	1	+	.	.	+	+
Pteridium aquilinum	+	.	+	+	+	.	.	3	+	+	+	1	1	.	.	.
Trientalis europaea	.	+	.	.	.	.	.	+	.	.	1	1	1	1	+	.
Vaccinium myrtillus	+	+	.	.	.	+	+	.	.	.	1	2	1	1	.	+
Veronica officinalis	.	+	.	.	.	.	+	+	.	+	.	.	.	.	.	.

Ch Carpinion

Carpinus betulus	5	5	5	5	5	5	4	2	2	4	3	4	4	4	4	4
Cerasus avium	.	.	.	.	.	.	.	.	.	.	1	.	.	2	.	.
Stellaria holostea	+	+	.	.	+	3	4	2	2	2	2	1	2	1	1	1
Tilia cordata	1	.	.	.	1	.	.	4	2	.	.	1	1	.	.	.

Ch Fagetalia sylvaticae

Acer pseudoplatanus	+	+	.	.	.	+	+	.	.	.	.	.	.	.	.	.
Actaea spicata	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+
Asarum europaeum	.	.	.	.	.	.	.	.	.	.	.	4	.	2	2	2
Carex pilosa	.	.	.	.	.	.	.	2	2	+	.	.	.	.	.	.
Dentaria bulbifera	.	+	.	.	.	+	+	.	.	.	.	.	.	.	.	.
Dryopteris filix-mas	.	.	+	.	.	.	+	1	.	+	.	1	.	1	.	+
Galium odoratum	.	+	+	.	1	+	+	.	.	.	.	.	.	3	.	.
Lamium galeobdolon	+	+	.	.	.	.	+	+	.	.	1	.	1	.	1	.
Lathyrus vernus	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Milium effusum	+	+	.	.	+	+	+	+	.	2	.	1	.	.	+	.
Paris quadrifolia	.	.	.	.	.	.	.	.	.	.	.	.	.	1	+	.
Polygonatum multiflorum	+	1	.	.	+	+	+	+	.	.	.	.	.	.	.	.
Pulmonaria obscura	.	+	.	.	+	.	.	.	.	.	.	.	.	1	.	.
Sanicula europaea	.	.	+	+	.	.	.	.	.	.	.	.	.	+	.	.
Viola reichenbachiana	.	.	+	1	.	.	.	.	.	.	.	.	.	.	.	.

Other species

Acer platanoides	1	.	.	.	+	+	+	+	+	+	.	4	+	3	1	1
Acer tataricum	.	.	.	.	.	.	.	.	.	.	3	1	.	1	.	1
Aegopodium podagraria	.	.	.	4	.	.	.	1	1	.	.	2	+	.	.	.
Ajuga reptans	.	.	+	+	.	+	+	+	+	.	+	+	.	+	1	+
Alnus glutinosa	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.
Anemone nemorosa	2	1	+	+	2	2	3	4	2	+	.	1	1	.	.	.
Athyrium filix-femina	.	.	.	.	+	.	.	.	.	1	.	.	.	+	.	.
Betula pendula	1	+	.	1	.	.	2	2	3	4	1	2	.	.	4	3
Campanula persicifolia	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Carex brizoides	.	.	.	.	.	.	.	4	2	3	.	.	.	.	.	.
Carex digitata	+	+	.	1	.	.	+	.	+	.	2	2	.	1	.	+
Carex pallescens	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
Cephalanthera longifolia	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Chelidonium majus	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	.
Clematis recta	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+
Clinopodium vulgare	.	.	.	.	.	.	.	.	.	.	+	1	.	+	.	+
Convallaria majalis	+	1	+	+	1	+	+	2	1	.	.	.	.	.	.	.
Corylus avellana	+	+	3	.	+	.	.	.	2	2	2	2	1	4	+	1
Cruciata glabra	.	.	+	+	.	+	+	+	+	+	.	1	.	+	1	+
Deschampsia caespitosa	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
Dryopteris carthusiana	+	.	.	.	+	+	+	.	.	1	1	.	1	+	.	.
Euonymus europaea	.	.	.	.	+	.	.	.	.	.	.	.	.	.	1	.
Euonymus verrucosa	.	.	.	.	.	.	.	2	1	.	1	1	.	1	.	.
Fragaria vesca	.	.	.	.	.	.	.	.	+	.	1	1	.	.	1	+
Frangula alnus	.	.	.	.	.	.	.	.	.	2	2	1	1	+	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Fraxinus excelsior	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.
Galium verum	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.
Geranium robertianum	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	+
Geum urbanum	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.
Hypopitys monotropa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
Lapsana communis	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.
Laserpitium latifolium	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Lilium martagon	.	.	+	+	.	.	.	.	+	.	.	.	.	.	.	.	.
Luzula pilosa	+	+	+	.	+	+	+	1	1	+	1	.	+	+	+	+	+
Majanthemum bifolium	2	2	+	1	+	2	2	1	1	+	1	.	2	1	1	1	1
Malus sylvestris	.	.	.	.	.	.	.	.	.	.	1	.	.	1	.	.	+
Melampyrum nemorosum	.	+	.	.	.	.	.	2	.	+	.	.	.	.	.	.	.
Melampyrum pratense	.	.	.	+	.	.	.	.	.	.	+	.	1	.	.	.	.
Melica nutans	+	+	+	+	.	.	.	1	.	.	+	1	.	1	1	1	+
Melittis sarmatica	.	.	+	+	.	.	.	.	.	.	.	.	.	1	1	1	+
Moehringia trinervia	.	+	.	.	.	.	+	.	.	.	1	.	.	.	.	+	.
Mycelis muralis	.	.	.	.	.	.	.	.	.	.	+	.	.	+	+	+	+
Neottia nidus-avis	.	.	+	+	.	.	+	.	.	.	.	+	.	.	.	+	+
Oxalis acetosella	+	1	.	.	+	1	2	.	.	.	+	.	1	.	.	.	.
Peucedanum oreoselinum	.	.	.	.	.	.	.	.	.	+	1	+	.	.	.	.	.
Picea abies	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
Pinus sylvestris	.	1	.	.	.	.	1	+	2	+	4	2	.	1	.	.	.
Platanthera bifolia	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Platanthera chlorantha	.	+	+	+	+	.	+	+	+	.	.	.	.	.	.	.	.
Poa nemoralis	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
Polygonatum odoratum	.	.	.	.	.	.	.	.	+	+	+	+	1	1	.	.	.
Populus tremula	.	+	.	.	.	.	.	.	.	.	3	2	.	2	.	.	.
Potentilla erecta	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
Pulmonaria mollis	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Pyrus communis	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
Quercus robur	5	4	4	4	4	4	4	4	4	4	3	4	4	4	4	4	4
Ranunculus polyanthemos	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
Rubus caesius	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Rubus idaeus	.	.	.	.	.	.	.	.	.	.	2	+	.	.	.	.	.
Rubus nessensis	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
Rubus saxatilis	.	.	+	+	.	.	.	.	+	.	.	+	.	1	+	+	+
Serratula tinctoria	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
Solidago virgaurea	.	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.
Sorbus aucuparia	+	+	.	.	+	.	.	2	+	2	1	1	1	1	1	1	1
Urtica dioica	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
Veronica chamaedrys	.	.	+	+	.	.	.	.	.	.	.	.	.	+	.	.	.
Viburnum opulus	.	.	.	.	.	.	.	.	.	.	.	+	.	1	1	.	.
Viola canina	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
Viola mirabilis	.	.	1	+	.	.	.	.	.	.	1	1	.	1	1	1	1
Distribution of trees and shrubs by height																	
> 5.0 m																	
Acer platanoides	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Betula pendula	1	.	.	1	.	.	2	2	3	4	-	-	-	-	-	-	-
Carpinus betulus	5	5	5	5	5	5	4	.	2	4	-	-	-	-	-	-	-
Euonymus verrucosa	.	.	.	.	.	.	.	.	1	.	-	-	-	-	-	-	-
Pinus sylvestris	.	1	.	.	.	.	1	.	2	+	-	-	-	-	-	-	-
Quercus robur	5	4	4	4	4	4	4	4	4	4	-	-	-	-	-	-	-
Tilia cordata	1	.	.	.	1	.	.	4	2	.	-	-	-	-	-	-	-
0.5-5.0 m																	
Acer platanoides	.	.	.	.	+	.	+	+	+	+	-	-	-	-	-	-	-
Acer pseudoplatanus	.	.	.	.	.	+	.	.	.	.	-	-	-	-	-	-	-
Carpinus betulus	+	+	.	2	+	.	.	2	+	2	-	-	-	-	-	-	-
Corylus avellana	+	+	3	.	+	.	.	.	2	2	-	-	-	-	-	-	-
Euonymus verrucosa	.	.	.	.	.	.	.	2	.	.	-	-	-	-	-	-	-
Frangula alnus	.	.	.	.	.	.	.	.	.	2	-	-	-	-	-	-	-
Picea abies	.	.	.	.	.	.	.	.	+	.	-	-	-	-	-	-	-
Pinus sylvestris	.	.	.	.	.	.	.	.	+	+	.	-	-	-	-	-	-
Populus tremula	.	+	.	.	.	.	.	.	.	.	-	-	-	-	-	-	-
Pyrus communis	.	.	.	.	.	.	.	.	+	.	-	-	-	-	-	-	-
Sorbus aucuparia	+	.	.	.	+	.	.	2	+	2	-	-	-	-	-	-	-
Tilia cordata	.	.	.	.	.	.	.	.	+	+	.	-	-	-	-	-	-

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
< 0.5 m																
<i>Acer platanoides</i>	+	.	.	.	+	+	+	-	-	-	-	-
<i>Acer pseudoplatanus</i>	+	+	+	-	-	-	-	-
<i>Betula pendula</i>	.	+	-	-	-	-	-
<i>Carpinus betulus</i>	.	+	.	.	+	.	+	-	-	-	-	-
<i>Corylus avellana</i>	+	+	-	-	-	-	-
<i>Euonymus europaea</i>	+	-	-	-	-	-
<i>Populus tremula</i>	.	+	-	-	-	-	-
<i>Rubus caesius</i>	+	-	-	-	-	-
<i>Sorbus aucuparia</i>	+	+	.	.	+	-	-	-	-	-
<i>Tilia cordata</i>	+	-	-	-	-	-

- 1 – Onyshchenko V.A. (16.04.2002+15.06.2003), Volyn Region, Kivertsi District (Biodiversity... 2004: 107-112, tab. 8, rel. 1);
 2 – Onyshchenko V.A. (16.04.2002+15.06.2003), Volyn Region, Kivertsi District (Biodiversity... 2004: 107-112, tab. 8, rel. 2);
 3 – Andrienko T.L. (14.07.2002), Volyn Region, Kivertsi District (Biodiversity ... 2004: 107-112, tab. 8, rel. 3);
 4 – Andrienko T.L. (14.07.2002), Volyn Region, Kivertsi District (Biodiversity ... 2004: 107-112, tab. 8, rel. 4);
 5 – Onyshchenko V.A. (18.04.2002+16.06.2003), Volyn Region, Kivertsi District (Biodiversity... 2004: 107-112 tab. 8, rel. 5);
 6 – Andrienko T.L. (15.06.2002), Volyn Region, Kivertsi District (Biodiversity ... 2004: 107-112, tab. 8, rel. 6);
 7 – Andrienko T.L. (16.04.2002+02.07.2002), Volyn Region, Kivertsi District (Biodiversity... 2004: 107-112, tab. 8, rel. 10);
 8 – Yuglichek L.S. (03.05.1999+07.08.1999), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 9);
 9 – Yuglichek L.S. (09.05.1999+19.07.2001), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 11);
 10 – Yuglichek L.S. (07.08.1999), Khmelnytsky Region, Shepetivka District, (Yuglichek & Onyshchenko 2003: tab. 1, rel. 8);
 11 – Yakushenko D.M., Zhytomyr Region, Korostyshiv District (Orlov & Yakushenko 2005: 122-123, tab. 29, rel. 1);
 12 – Yakushenko D.M., Zhytomyr Region, Korostyshiv District (Orlov & Yakushenko 2005: 122-123, tab. 29, rel. 2);
 13 – Yakushenko D.M., Zhytomyr Region, Korostyshiv District (Orlov & Yakushenko 2005: 122-123, tab. 29, rel. 3);
 14 – Yakushenko D.M., Zhytomyr Region, Korostyshiv District (Orlov & Yakushenko 2005: 122-123, tab. 29, rel. 4);
 15 – Yakushenko D.M., Zhytomyr Region, Korostyshiv District (Orlov & Yakushenko 2005: 122-123, tab. 29, rel. 6);
 16 – Yakushenko D.M., Zhytomyr Region, Korostyshiv District (Orlov & Yakushenko 2005: 122-123, tab. 29, rel. 7).

Table 45. Subass. *Tilio-Carpinetum typicum* Traczyk 1962

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Exposition	W	-	SS E	-	-	-	S	N	-	-	S	-	E	-	-	-	-	SE	N	S	N	W	E	-	-
Inclination	7	0	40	0	0	0	5	5	0	0	10	0	5	0	0	0	0	10	4	22	1	3	2	0	0
Tree layer	80	75	95	85	83	85	70	60	70	70	50	60	80	40	80	80	60	70	90	75	80	55	77	90	75
Shrub layer	0	0	0	1	3	0	0	0	40	0	30	40	20	50	0	20	20	20	0	0	5	5	20	0	25
Herb layer in summer relevé		22	50	10		7	35	70			5	30	65	30	5	20	65	60	30		7	50	20	40	30
Herb layer in spring relevé	5	50	35		55	7	70	60	50	75	70	75	60	60	50	35	85	70	50	2	17	30	20	40	55
Mosses		0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3		0	0	0	0	0
Area (sq. m)		900	400	900		900	2500	500	2500	2500	5000	1800	1800	2500	2500	2500	2500	2500	900	600	625	400	400	400	625
Number of species of vascular plants	15	31	34	25	31	24	26	21	22	26	22	46	38	43	20	16	43	34	32	28	17	35	26	25	22
Point number on Fig. 11	27	12	12	12	12	12	14	14	14	14	14	14	14	14	14	14	14	14	7	7	3	3	3	3	3

Ch Carpinion

<i>Carpinus betulus</i>	4	4	5	4	4	5	5	4	2	4	4	3	4	3	5	5	+	2	5	4	4	2	1	4	1
<i>Cerasus avium</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.
<i>Stellaria holostea</i>	1	3	2	+	+	+	2	2	2	.	+	2	1	2	+	.	+	2	+	+	+	+	.	1	+
<i>Tilia cordata</i>	.	1	+	.	.	+	.	.	5	.	.	5	2	3	.	4	3	4	4	.	4	4	+	4	4

Ch Fagetalia sylvaticae

<i>Acer pseudoplatanus</i>	.	1	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	+	+
<i>Adoxa moschatellina</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Anemone ranunculoides</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	2	.	.	.	.	.
<i>Asarum europaeum</i>	.	+	+	+	.	.	+	1	.	.	.	+	+	+	.	.	.	+	2	3	+	.	.	.	+	3
<i>Carex pilosa</i>	.	.	.	.	.	.	2	4	2	.	3	2	4	4	1	+	4	4	1	.	1	4	2	+	3	
<i>Daphne mezereum</i>	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Dentaria bulbifera</i>	.	1	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Dryopteris filix-mas</i>	.	.	1	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
<i>Galium odoratum</i>	+	+	.	+	.	+	.	2	.	.	.	.	.	.	+	.	.	.	.	2	2	.	.	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
<i>Betula pendula</i>	.	2	.	1	4	.	.	.	.	.	.	2	3	2	+	.	.	.	.	.	.	.	.	.	.
<i>Carpinus betulus</i>	4	4	5	4	4	5	5	4	.	4	4	2	4	3	5	5	+	+	5	4	4	2	.	4	1	
<i>Corylus avellana</i>	+	.	.	.	1	.	2	.	.	.	.	.	.	.	.	.	.	.	.
<i>Fraxinus excelsior</i>	1	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	1	.	.	.	.
<i>Luzula pilosa</i>	+	
<i>Picea abies</i>	3	3	.	.	.	.	.	.
<i>Pinus sylvestris</i>	.	.	2	.	.	1	.	.	.	.	.	.	+	+	+	.	.	.	.	.	1	.	.	.	.
<i>Populus tremula</i>	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Quercus robur</i>	4	4	5	4	1	4	4	4	3	4	5	3	4	2	4	2	4	+	.	2	1	2	.	4	4	
<i>Sorbus aucuparia</i>	+	
<i>Tilia cordata</i>	.	1	.	.	.	+	.	.	5	.	.	4	.	3	.	3	3	4	4	4	.	4	4	.	4	
<i>Ulmus glabra</i>	1	.	.	.	.
0.5-5.0 m																										
<i>Abies alba</i>	2	.	
<i>Acer platanoides</i>	.	.	.	+	.	.	+	.	2	+	+	2	2	+	+	+	.	.	.	.	.	.	.	.	.
<i>Acer pseudoplatanus</i>	.	.	.	+	+	
<i>Betula pendula</i>	1	.	.	.	
<i>Carpinus betulus</i>	.	.	.	+	1	+	.	.	2	.	2	2	.	2	.	2	.	2	.	.	1	.	1	.	+	
<i>Cerasus avium</i>	+	
<i>Corylus avellana</i>	.	+	.	1	1	.	+	+	4	+	2	4	4	4	.	3	3	3	.	+	1	+	2	+	+	
<i>Crataegus curvisepala</i>	+	.	
<i>Euonymus verrucosa</i>	.	.	+	.	+	.	+	+	+	
<i>Frangula alnus</i>	+	2	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Grossularia uva-crispa</i>	+	
<i>Padus avium</i>	+	+	
<i>Picea abies</i>	+	+	+	+	
<i>Populus tremula</i>	.	.	+	+	.	.	
<i>Prunus divaricata</i>	+	
<i>Pyrus communis</i>	+	
<i>Quercus robur</i>	+	.	.	
<i>Rubus idaeus</i>	+	+	
<i>Salix caprea</i>	+	.	.	
<i>Sambucus nigra</i>	+	
<i>Sorbus aucuparia</i>	.	.	+	+	+	3	+	.	.	.	.	.	.	.	.	.	.	+	+	.
<i>Tilia cordata</i>	.	.	+	.	+	2	2	.	2	.	.	.	.	.	1	1	.	+	+	
<i>Viburnum opulus</i>	+	
< 0.5 m																										
<i>Abies alba</i>	+	+	.
<i>Acer platanoides</i>	.	2	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
<i>Acer pseudoplatanus</i>	.	+	.	+	+	.	.	.	+	+	
<i>Betula pendula</i>	+	.	+	+	+	
<i>Carpinus betulus</i>	.	+	.	1	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+
<i>Cerasus avium</i>	+	
<i>Corylus avellana</i>	.	.	+	+	+	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	+
<i>Crataegus curvisepala</i>	+	+	.	
<i>Daphne mezereum</i>	+	.	.	.	+	+	
<i>Euonymus europaea</i>	+	
<i>Euonymus verrucosa</i>	.	.	+	.	+	+	
<i>Frangula alnus</i>	+	
<i>Fraxinus excelsior</i>	.	+	.	+	+	
<i>Padus avium</i>	+	1	
<i>Picea abies</i>	+	+	.	.	2	.	.	.	.	.	.	.	.	.
<i>Populus tremula</i>	.	.	+	+	
<i>Quercus robur</i>	4	.	.	.	.	.	.	.	.	.	+	+	+
<i>Rubus caesius</i>	.	+	.	.	+	
<i>Rubus hirtus</i>	+	
<i>Rubus idaeus</i>	.	+	.	.	+	
<i>Salix caprea</i>	+	.	.	
<i>Sambucus racemosa</i>	+	.	
<i>Sorbus aucuparia</i>	.	.	+	.	.	+	+	+	.	
<i>Tilia cordata</i>	.	.	+	.	.	+	+	+	+	+	
<i>Viburnum opulus</i>	+	+	+	+	+	
Mosses																										
<i>Atrichum undulatum</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	-	-	
<i>Pleurozium schreberi</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.	+	-	-	
<i>Polytrichum formosum</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.	+	+	-	
<i>Thuidium recognitum</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.	+	.	-	

- 1 – Pryadko O.I. (15.05.1982), Chernihiv Region, Ripky District;
 2 – Onyshchenko V.A. (16.04.2002+15.06.2003), Volyn Region, Kivertsi District (Biodiversity... 2004: 107-112, tab. 8, rel. 7);
 3 – Onyshchenko V.A. (16.04.2002+15.06.2003), Volyn Region, Kivertsi District (Biodiversity... 2004: 107-112, tab. 8, rel. 8);
 4 – Onyshchenko V.A. (16.04.2002+15.06.2003), Volyn Region, Kivertsi District (Biodiversity... 2004: 107-112, tab. 8, rel. 12);
 5 – Onyshchenko V.A. (22.04.2002), Volyn Region, Kivertsi District, (Biodiversity ... 2004: 107-112, tab. 8, rel. 9);
 6 – Onyshchenko V.A. (18.04.2002+16.06.2003), Volyn Region, Kivertsi District (Biodiversity... 2004: 107-112, tab. 8, rel. 13);
 7 – Yuglichek L.S. (09.04.1999+07.08.1999), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 28);
 8 – Yuglichek L.S. (09.04.1999+09.08.1999), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 29);
 9 – Yuglichek L.S. (02.05.1999), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 20);
 10 – Yuglichek L.S. (03.05.1999), Khmelnytsky Region, Iziaslav District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 24);
 11 – Yuglichek L.S. (16.04.2000+25.07.2000), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 15);
 12 – Yuglichek L.S. (02.05.2001+04.08.2001), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 21);
 13 – Yuglichek L.S. (02.05.2001+04.08.2001), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 22);
 14 – Yuglichek L.S. (02.05.2001+04.08.2001), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 23);
 15 – Yuglichek L.S. (25.07.2000+15.04.2001), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 16);
 16 – Yuglichek L.S. (19.07.2000+15.04.2001), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 17);
 17 – Yuglichek L.S. (11.07.2000+14.04.2001), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 26);
 18 – Yuglichek L.S. (11.07.2000+14.04.2001), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 25);
 19 – Onyshchenko V.A. (26.06.1998+16.04.1999), Ternopil Region, Kremenets District, Medobory Nature Reserve (Onyshchenko 2002: tab. 1, rel. 4);
 20 – Onyshchenko V.A. (17.04.1999), Ternopil Region, Kremenets District, Medobory Nature Reserve (Onyshchenko 2002: tab. 1, rel. 1);
 21 – Onyshchenko V.A. (22.08.2006+27.04.2007), Ivano-Frankivsk Region, Ivano-Frankivsk District, Rybnynske forestry;
 22 – Onyshchenko V.A. (22.08.2006+27.04.2007), Ivano-Frankivsk Region, Ivano-Frankivsk District, Rybnynske forestry;
 23 – Onyshchenko V.A. (22.08.2006+27.04.2007), Ivano-Frankivsk Region, Ivano-Frankivsk District, Rybnynske forestry;
 24 – Onyshchenko V.A. (22.08.2006+27.04.2007), Ivano-Frankivsk Region, Ivano-Frankivsk District, Rybnynske forestry;
 25 – Onyshchenko V.A. (22.08.2006+27.04.2007), Ivano-Frankivsk Region, Ivano-Frankivsk District, Rybnynske forestry.

Table 46. Subass. *Tilio-Carpinetum stachyetosum* Traczyk 1962 and *Tilio-Carpinetum corydaletosum* Traczyk 1962

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Exposition	-	-	-	NEE	SSW	S	-	-	?	-	N	-	N	N	S	-	W	W
Inclination	0	0	0	2	12	7	0	0	2	0	10	0	8	27	18	0	20	15
Tree layer	90	70	90	100	80	75	65	70	90	70	80	80	80	90	95	90	80	85
Shrub layer	20	1	1	0	0	0	10	5	1	5	5	0	0	0	0	0	0	2
Herb layer in summer		30		5	45	70	70	60	55	90		10	30	27	35			
Herb layer in spring	85	50	45	30	50	50	60	55	40	80	60	65	80	60	20	60	55	55
Mosses	1	0	0	0	0	0					0			2		1		0
Area (sq. m)	300	900	900	1200	800	2500	900	450	600	750	2500	2500	900	800	900	900	900	450
Number of species of vascular plants	30	46	30	23	36	40	38	33	22	37	29	41	31	42	35	23	38	32
Point number on Fig. 11	14	12	12	7	7	14	27	27	27	27	14	14	7	7	7	7	7	7
Syntaxa	1						2											

**D subass. stachyetosum,
corydaletosum**

<i>Anemone ranunculoides</i>	.	+	.	.	.	.	2	+	2	4	+	+	1	2	.	+	2	1
<i>Circaea lutetiana</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	+	.	.	.	.
<i>Festuca gigantea</i>	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Ficaria verna</i>	2	+	+	+	+	+	.	.	.	.	+	+	+	.	+	2	+	+
<i>Padus avium</i>	.	+	+	.	.	.	1	1	+	+	.	.	.	.	.	.	.	.

D subass. corydaletosum

<i>Corydalis cava</i>	.	.	.	.	.	.	+	3	4	2	1	+	.	4	.	.	2	4
<i>Corydalis solida</i>	.	.	.	.	.	.	2	4	3	+	2	3	4	2	+	3	2	3
<i>Gagea lutea</i>	.	.	.	.	.	+	.	.	.	.	.	.	+	+	+	1	+	+
<i>Gagea minima</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	+	+	.	+	+

Neg. D subass.

corydaletosum

<i>Ajuga reptans</i>	+	.	+	.	+	+	+	.	.	.	.	+	.	.	.	.	.	.
<i>Fragaria vesca</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	+
<i>Luzula pilosa</i>	+	.	.	.	.	1	.	.	.	.	.	+	.	.	.	.	.	.
<i>Sanicula europaea</i>	.	.	.	+	+	+	.	.	.	.	.	.	.	.	+	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Ch Carpinion																			
Carpinus betulus	5	4	4	5	5	4	3	2	4	3	4	4	5	1	5	5	4	4	
Cerasus avium	.	.	.	+	1	.	.	.	.	.	.	.	+	.	.	1	.	.
Stellaria holostea	3	+	+	.	.	3	+	4	2	5	1	1	1	.	.	.	+	+	
Tilia cordata	+	2	+	1	1	+	3	2	+	2	1	3	2	.	.	1	+	.	
Ch Fagetalia sylvaticae																			
Acer pseudoplatanus	.	3	.	.	.	.	.	.	.	.	.	.	2	1	+	+	2	.
Actaea spicata	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Adoxa moschatellina	.	.	.	+	+	.	.	+	.	.	.	.	.	+	+	+	+	+
Asarum europaeum	+	+	+	.	1	+	+	1	1	+	+	+	+	2	2	+	+	+	
Carex pilosa	.	.	.	.	.	4	5	1	4	+	.	+	.	.	.	.	.	.
Carex sylvatica	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.
Daphne mezereum	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Dentaria bulbifera	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dryopteris filix-mas	.	+	.	.	+	.	.	.	.	.	.	.	2	+	.	.	.	+
Galium odoratum	.	+	+	.	+	.	+	+	.	1	.	.	1	+	+	.	+	+	
Isopyrum thalictroides	.	.	.	.	.	3	.	.	.	.	2	+	+	+	.	+	+	+
Lamium galeobdolon	.	+	.	.	+	1	.	.	.	.	1	2	3	2	3	+	1	+
Lathyrus vernus	+	+	.	.	+	+	+	.	+	+	.	+	.	.	+	.	.	.	
Mercurialis perennis	.	.	.	.	.	+	.	.	.	.	1	+	.	+	+	.	.	+
Milium effusum	.	+	+	.	.	+	+	+	.	.	.	.	+	.	.	.	.	.
Paris quadrifolia	.	+	+	+	.	+	+	+	.	+	.	.	+	+	+	+	+	+	
Polygonatum multiflorum	.	+	+	.	+	.	.	.	.	.	.	+	+	+	+	+	+	+
Pulmonaria obscura	.	+	.	.	+	1	+	+	+	.	+	+	.	.	+	.	.	+	
Scrophularia nodosa	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.
Stachys sylvatica	.	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	+
Ulmus glabra	.	.	.	.	+	.	+	+	.	+	.	.	+	3	+	.	.	2
Viola reichenbachiana	.	.	+	+	+	.	.	.	.	+	.	.	+	.	+	.	+	.
D Tilio-Carpinetum versus Galio-Carpinetum and Stellario-Carpinetum																			
Euonymus verrucosa	.	.	.	.	+	+	.	.	+	.	.	+	+	.	+	.	+	.
Galium intermedium	.	.	.	.	.	.	.	2	.	2	.	+	.	.	.	.	.	.
Picea abies	.	.	.	.	.	+	.	.	.	.	+	+	.	.	.	.	.	.
Ranunculus cassubicus	+	+	.	.	+	+	.	.	.	.	.	.	.	.	+	.	+	.
D Tilio-Carpinetum versus Isopyro-Carpinetum and Galeobdolino-Carpinetum																			
Anemone nemorosa	4	4	4	4	3	3	+	1	.	4	5	4	4	3	+	4	3	2	
Betula pendula	2	2	3	2	.	+	3	.	.	.	.	3	2	.	.	.	4	.
Dryopteris carthusiana	+	+	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.
Majanthemum bifolium	+	+	+	.	+	+	+	+	.	+	1	+	.	.	+	+	.	.	
Pinus sylvestris	4	.	1	.	.	.	.	.	.	.	.	.	+	.	.	1	.	.
Sorbus aucuparia	+	+	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+
Other species																			
Acer platanoides	+	2	3	1	+	.	2	3	2	2	.	+	+	+	2	2	2	2	
Aegopodium podagraria	2	2	+	.	.	2	+	4	2	+	.	+	1	1	+	+	+	+	
Alliaria petiolata	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	+
Alnus glutinosa	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Anthericum ramosum	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
Asplenium trichomanes	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
Athyrium filix-femina	.	+	.	.	+	.	.	.	.	.	.	.	+	.	.	.	.	.
Caltha palustris	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Campanula patula	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Campanula persicifolia	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Campanula rapunculoides	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
Campanula trachelium	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.
Carex brizoides	+	.	.	.	.	3	.	.	.	.	5	.	.	.	.	.	.	.
Carex spicata	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Carex digitata	.	+	.	.	.	+	+	.	.	.	.	+	.	.	+	.	.	.
Carex elongata	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Carex hirta	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.
Chaerophyllum temulum	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	+
Chelidonium majus	.	.	.	.	.	.	.	+	.	5	.	.	.	+	.	.	.	+

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Chrysosplenium alternifolium	.	.	.	+	+	+	.	+	.	+	.	.
Convallaria majalis	+	.	+	.	.	.	+	+	.	2	1	+	.	.	.	.	.	.
Corylus avellana	2	+	+	.	.	+	2	+	1	.	2	.	.	.	.	.	.	.
Cruciata glabra	.	+	+
Cystopteris fragilis	+
Dentaria glandulosa	+
Dentaria quinquefolia	+
Deschampsia caespitosa	.	+	+
Epipactis helleborine	+
Equisetum hyemale	2	.	.	.	.	.	.	.	.	.	.	.
Equisetum sylvaticum	.	+	+
Euonymus europaea	.	+	+	+	+	.	+	+	.	+	+	.
Fagus sylvatica	.	.	.	+
Frangula alnus	.	+
Fraxinus excelsior	.	+	2	.	+	.	.	2	2	2	.	.	4	5	+	.	.	5
Galanthus nivalis	+	.	1	1	1
Galeopsis pubescens	.	.	.	+	+	.	.	.
Galeopsis sp.	.	+
Galium aparine	+
Geranium phaeum	+
Geranium robertianum	.	.	.	+	1	.	.	.	.	.	.	.	+	+	+	.	+	+
Geum rivale	+	+	+	.	.	+	+
Geum urbanum	+	.	+	+	.	.	+	.
Glechoma hederacea	.	+
Glechoma hirsuta	.	+	+	+	.	+	+	+	.
Grossularia uva-crispa	.	.	.	+	+	+	.	.	.
Hepatica nobilis	+	.	.	+	+	.	+	+
Hypericum montanum	+
Hypopitys monotropa
Lamium maculatum	+	.	.	+	+
Lapsana communis	+
Larix sp. (cult.)	1	.
Lathraea squamaria	+	+	+
Lilium martagon	.	.	+	.	.	+	.	+	.	.	.	+
Luzula sylvatica	+
Lysimachia nummularia	+
Malus sylvestris	.	.	+
Melica nutans	+	+	+
Moehringia trinervia	+	+	.	.	.
Mycelis muralis	.	.	.	+	+	+	.	.
Omphalodes scorpioides	+	+
Oxalis acetosella	.	2	+	+	.	.	.	.	.	.	.	+	1	.	.	+	.	+
Phyteuma spicatum	+	+
Platanthera bifolia	+	.	+
Platanthera chlorantha	.	+	.	.	.	+	+
Poa nemoralis	+	+	.	.	.
Polygonatum odoratum	+	1	1	1	.	.	.	.	.	.	.	.
Populus tremula	.	.	4	1	.	.	+	.	+	.	.	.	.	.	.	.	.	.
Primula acaulis	+	1	.	.	.	.	.	.	.	.	.	.	.	.
Pulmonaria angustifolia
Pulmonaria officinalis	+	2	+	.	.	.	.	.	.
Pyrola rotundifolia	+
Pyrus communis
Quercus robur	+	4	.	4	.	4	3	4	5	5	5	3	.	1	+	3	.	.
Rubus caesius	+
Rubus idaeus	.	+
Rubus saxatilis	+
Sambucus nigra	.	.	.	+	+	+	+	.	.	.
Swida sanguinea	+	+
Ulmus minor	+	+	2	.	.	.	.	.	.	.	.
Urtica dioica	+	+	+	.	+	.	+	+	.	+	+	.	.	+	.	+	+	.
Veratrum lobelianum	.	.	+
Viburnum opulus	+
Vincetoxicum hirundinaria	+
Viola mirabilis	+	.	+	.	.	+
Viola odorata + V. suavis	+	.	+

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Distribution of trees and shrubs by height																		
> 5.0 m																		
<i>Acer platanoides</i>	.	1	1	.	.	.	2	3	2	2	.	.	.	+	2	2	2	2
<i>Acer pseudoplatanus</i>	.	2	.	.	.	.	.	.	.	.	.	.	2	1	.	.	2	.
<i>Alnus glutinosa</i>	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Betula pendula</i>	2	2	3	2	.	+	3	.	.	.	.	3	2	.	.	.	4	.
<i>Carpinus betulus</i>	5	4	4	5	5	4	2	2	4	3	4	4	5	1	5	5	4	4
<i>Cerasus avium</i>	1	.	.	.	.	.	.	.	.	.	.	1	.	.
<i>Corylus avellana</i>	.	.	+
<i>Fraxinus excelsior</i>	.	.	2	.	.	.	.	2	2	2	.	.	4	5	.	.	.	5
<i>Larix sp. (cult.)</i>	1	.
<i>Malus sylvestris</i>	.	.	+
<i>Picea abies</i>	+
<i>Pinus sylvestris</i>	4	.	1	.	.	.	.	.	.	.	.	.	+	.	1	.	.	.
<i>Populus tremula</i>	.	.	4	.	.	.	+	.	+	.	.	.	.	.	.	.	.	.
<i>Pyrus communis</i>
<i>Quercus robur</i>	.	4	.	4	.	4	3	4	5	5	5	3	.	1	.	3	.	.
<i>Tilia cordata</i>	.	2	.	1	1	+	3	2	+	2	.	3	2	.	.	1	.	2
<i>Ulmus glabra</i>	3	.	.	.	.
<i>Ulmus minor</i>	2	.	.	.	.	.	.	.	.
0.5-5.0 m																		
<i>Acer platanoides</i>	.	.	2	.	.	.	+	+	+	.	.	+	.	.	.	.	.	1
<i>Acer pseudoplatanus</i>	+
<i>Carpinus betulus</i>	2	.	.	.	.	.	2	+	+	+	1	+	.	.	.	.	+	+
<i>Corylus avellana</i>	2	+	+	.	.	+	2	+	1	.	2	.	.	.	.	.	.	.
<i>Euonymus europaea</i>	+	+	+	+
<i>Euonymus verrucosa</i>	+	.	.	+	.	.	+	+
<i>Frangula alnus</i>	.	+
<i>Fraxinus excelsior</i>	+	+	+
<i>Grossularia uva-crispa</i>	.	.	.	+	+
<i>Padus avium</i>	.	+	+	.	.	.	1	1	+	+	.	.	.	.	.	.	.	.
<i>Picea abies</i>	+	+
<i>Sambucus nigra</i>	+	.	.	.
<i>Sorbus aucuparia</i>	.	+	+
<i>Swida sanguinea</i>	+	+
<i>Tilia cordata</i>	.	.	+	.	.	.	+	+	+	+	1	+	.	.	.	.	.	.
<i>Ulmus glabra</i>	+	+	.	+	1
<i>Ulmus minor</i>	+	+	+
< 0.5 m																		
<i>Acer platanoides</i>	+	1	+	1	+	.	+	+	+	+	.	.	+	+	2	+	+	.
<i>Acer pseudoplatanus</i>	.	1	.	.	.	.	.	.	.	.	.	.	+	.	+	+	.	.
<i>Carpinus betulus</i>	.	+	+	.	+	+	.
<i>Cerasus avium</i>	.	.	.	+	+	+	.	.	+	.	.
<i>Corylus avellana</i>	.	+
<i>Daphne mezereum</i>	+
<i>Euonymus europaea</i>	.	+	+	+	+	.	+	+	.	+	+	.
<i>Euonymus verrucosa</i>	+	.	.	.	+	.	.	.	+	.	+	.	+	.
<i>Fagus sylvatica</i>	.	.	.	+
<i>Fraxinus excelsior</i>	.	+	.	.	+	.	.	1	+	+	.	.	.	+	+	.	.	.
<i>Grossularia uva-crispa</i>	.	.	.	+	+	+	.	.	.
<i>Padus avium</i>	.	.	+	1	+	+	.	.	.	.	.	.	.	.
<i>Populus tremula</i>	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Quercus robur</i>	+	.	.	+	+	+	.	.	.
<i>Rubus caesius</i>	+
<i>Rubus idaeus</i>	.	+
<i>Sambucus nigra</i>	.	.	.	+	+	+	+	.	.	.
<i>Sorbus aucuparia</i>	+	+	.
<i>Swida sanguinea</i>	+	+
<i>Tilia cordata</i>	+	+	+	.	+	.	+	+	.	+	+	.
<i>Ulmus glabra</i>	+	.	.	+	+	.	+	.	.	.
<i>Viburnum opulus</i>	+

Syntaxa: 1 – *Tilio-Carpinetum stachyetosum*, 2 – *Tilio-Carpinetum corydaletosum*.

1 – Yuglichek L.S. (10.05.2002), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 31);
 2 – Onyshchenko V.A. (16.04.2002+15.06.2003), Volyn Region, Kivertsi District (Biodiversity... 2004: 107-112, tab. 8, rel. 15);

- 3 – Onyshchenko V.A. (22.04.2002), Volyn Region, Kivertsi District (Biodiversity... 2004: 107-112, tab. 8, rel. 14);
 4 – Onyshchenko V.A. (25.06.1998+18.04.1999), Ternopil Region, Kremenets District, Medobory Nature Reserve;
 5 – Onyshchenko V.A. (26.06.1998+19.04.1999), Ternopil Region, Kremenets District, Medobory Nature Reserve (Onyshchenko 2002: tab. 1, rel. 2);
 6 – Yuglichek L.S. (08.04.1999+07.08.1999), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 32);
 7 – Lukash O.V. (23.08.2005+04.2006), Chernihiv Region, Ripky District,;
 8 – Lukash O.V. (23.08.2005+04.2006), Chernihiv Region, Ripky District;
 9 – Lukash O.V. (23.08.2005+04.2006), Chernihiv Region, Ripky District;
 10 – Lukash O.V. (23.08.2005+04.2006), Chernihiv Region, Ripky District;
 11 – Yuglichek L.S. (16.04.2000+05.05.2000), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 33);
 12 – Yuglichek L.S. (25.07.2000+15.04.1999), Khmelnytsky Region, Shepetivka District (Yuglichek & Onyshchenko 2003: tab. 1, rel. 34);
 13 – Onyshchenko V.A. (28.06.1998+16.04.1999), Ternopil Region, Kremenets District, Medobory Nature Reserve, Masliatyn hill (Onyshchenko 2002: tab. 1, rel. 5);
 14 – Onyshchenko V.A. (24.06.1998+17.04.1999), Ternopil Region, Kremenets District, Medobory Nature Reserve, Strakhova hill (Onyshchenko 2002: tab. 1, rel. 6);
 15 – Onyshchenko V.A. (12.08.1998+17.04.1999), Ternopil Region, Kremenets District, Medobory Nature Reserve, Strakhova hill (Onyshchenko 2002: tab. 1, rel. 3);
 16 – Onyshchenko V.A. (17.04.1999), Ternopil Region, Kremenets District, Medobory Nature Reserve, Strakhova hill (Onyshchenko 2002: tab. 1, rel. 10);
 17 – Onyshchenko V.A. (17.04.1999), Ternopil Region, Kremenets District, Medobory Nature Reserve, Strakhova hill (Onyshchenko 2002: tab. 1, rel. 11);
 18 – Onyshchenko V.A. (17.04.1999), Ternopil Region, Kremenets District, Medobory Nature Reserve, Strakhova hill (Onyshchenko 2002: tab. 1, rel. 12).

Table 47. Subass. *Isopyro thalictroidis-Carpinetum caricetosum pilosae* Onyshchenko 1998

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Exposition	NW	S	SW	S	N	SW	SW W	E	W		-	-	S	-	NE	-	-	NE E	SW W	NN W
Inclination	15	3	5	3	9	2	7	15	15		0	0	5	0	1	0	0	4	6	27
Tree layer	75	65	70	75	75	88	80	85	75	60	60	87	80	75	80	80	80	45	75	80
Shrub layer	0	0	10	0	0	0	3	0	0	10	20	3	3	10	15	5	15	5	5	0
Herb layer in summer relevé	72	80	75	30	30		47	30	62	60	17	30	50	25	45	50	30	22	30	45
Herb layer in spring relevé	70	50	50	95	60	80	25	20	50	30	25	30	60	25	60	40	50	22	10	50
Mosses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Area (sq. m)	2500	2500	2500	2500	2500	2500	2500	2000	2500	120	900	900	900	900	900	900	900	900	300	2500
Number of vascular plants species	47	45	30	31	29	30	33	37	50	46	53	43	40	49	53	55	50	40	29	48
Point number on Fig. 12	4	4	4	4	4	4	4	4	4	4	6	6	6	6	6	6	6	6	22	4
Nomenclatural type of subassociation	*																			

D subass. caricetosum pilosae

<i>Campanula rapunculoides</i>	+	.	.	.	.	+	+	+	.	+	+	+	+	.	.	+	+	+	.	.
<i>Carex digitata</i>	+	.	.	.	.	.	+	+	+	.	.	.	.	.	.	.	.	.	.	.
<i>Carex pilosa</i>	5	5	5	1	4	1	3	4	2	2	1	3	4	3	3	2	3	+	4	+
<i>Convallaria majalis</i>	.	.	.	.	.	.	.	+	+	.	+	+	.	+	+	+	+	+	.	+
<i>Dactylis glomerata</i> s.l.	.	+	.	.	+	.	.	.	+	.	+	+	.	+	1	.	.	+	.	.
<i>Melica nutans</i>	.	.	.	.	+	.	.	.	.	.	+	+	+	+	+	+	+	+	+	.
<i>Vicia sepium</i>	.	.	.	.	.	.	.	.	.	+	.	.	+	.	+	+	+	+	.	.

D subass. corydaletosum cavae

<i>Corydalis cava</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	+	1	+	.	+	.	.
<i>Lamium maculatum</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+	1	.	.	.
<i>Sambucus nigra</i>	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	.	.	.	.	.
<i>Urtica dioica</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
D Isopyro-Carpinetum versus Galeobdolon-Carpinetum																					
Acer pseudoplatanus	+	+	.	.	1	.	.	1	1	.	.	.	.	.	.	+	2	.	.	.
Anemone nemorosa	3	2	3	4	2	4	1	2	3	2	.	.	.	.	.	.	.	.	.	+
Arum bessermanum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	.
Hepatica nobilis	.	.	.	.	.	.	.	.	.	.	.	+	+	.	+	+	+	+	.	+
Isopyrum thalictroides	4	3	4	4	2	4	.	+	2	2	.	+	+	.	2	.	.	2	.	3	
Polygonatum hirtum	+	+	.	.	.	.	+	+	+	+	+	+	+	+	+	1	+	+	+	+
Ch Carpinion																					
Carpinus betulus	5	5	4	4	5	5	4	5	4	3	+	5	5	5	4	5	5	4	4	4	
Cerasus avium	.	+	+	.	.	.	.	.	1	+	+	+	+	+	+	+	+	+	+	1
Stellaria holostea	1	+	2	1	1	+	+	+	+	+	1	1	+	2	1	2	2	+	1	+	
Tilia cordata	1	1	3	+	2	+	+	3	1	+	+	1	2	+	4	1	3	+	+	2	
Ch Fagetalia sylvaticae																					
Actaea spicata	+	+
Adoxa moschatellina	.	.	+	.	.	.	1	.	+	.	.	.	.	.	.	.	.	.	.	.
Anemone ranunculoides	+	+	+	+	.	+	.	+	+	2	2	+	1	2	2	1	1	2	.	2	
Asarum europaeum	1	+	+	2	+	+	2	+	2	+	.	1	1	+	1	2	2	+	+	2	
Carex sylvatica	.	+	+	.	.	.	.	.	+	.	.	.	.	.	.	+	.	.	.	.
Corydalis solida	.	.	.	.	.	.	.	.	+	+	2	+	1	+	+	1	1	1	1	2
Daphne mezereum	+	+
Dentaria bulbifera	2	+	.	2	.	.	.	.	1	+	.	.	.	.	.	.	.	.	.	.
Dryopteris filix-mas	+	+	+	+	+	+	.	+	+
Ficaria verna	.	+	.	.	.	+	1	.	.	+	+	.	+	.	2	.	+	+	.	.	
Gagea lutea	.	.	+	.	.	+	1	.	+	+	+	1	+	+	1	+	+	.	.	.	
Gagea minima	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	+	.	.
Galium odoratum	+	.	1	2	2	+	2	+	2	+	.	.	.	.	1	.	+	.	+	2
Lamium galeobdolon	1	+	2	2	1	+	+	+	+	+	2	2	2	2	2	1	.	.	+	+	
Lathyrus vernus	+	+	.	+	+	+	.	+	+	+	+	+	+	+	+	+	+	+	+	.	
Mercurialis perennis	1	+	+	.	1	.	+	+	+	+	.	1	3	.	+	2	2	+	+	4	
Milium effusum	+	.	+	.	+	.	.	.	+	.	.	+	.	.	+	+	+	.	.	+	
Paris quadrifolia	+	+	+	+	.	.	+	+	+
Polygonatum multiflorum	.	+	+	+	+	+	.	+	+	+	.	.	.	+	.	+	+	+	+	+	
Pulmonaria obscura (+P. officinalis)	1	+	+	.	+	+	+	+	+	+	+	.	+	+	+	+	+	+	+	1	
Sanicula europaea	1	.	.	.	+	.	+	.	+	+
Scrophularia nodosa	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	+	.	.	.	.
Stachys sylvatica	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	+	.	.	.	.
Ulmus glabra	.	.	+	+	.	.	+	+	.	+	1	+	.	.	+	.	+	.	+	.	
Viola reichenbachiana	+	+	.	.	.	+	.	.	.	+	+	+	+	+	+	1	+	+	.	.	
Other species																					
Acer campestre	+	.	+	.	.	+	.	+	.	2	3	2	+	2	2	1	2	2	+	.	
Acer platanoides	1	+	+	+	1	.	3	+	1	3	.	1	.	+	3	.	1	+	.	2	
Acer tataricum	.	.	.	.	.	.	.	.	.	.	1	+	.	+	.	.	.	+	.	.
Aconitum lasiostomum	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Aegopodium podagraria	1	+	2	2	3	+	2	1	4	2	2	2	4	2	1	2	3	.	.	2	
Ajuga reptans	1	.	.	.	.	.	.	+	+	+	+	.	.	+	.	+	+	.	.	.
Alliaria petiolata	1	+	+	+	.	+
Astragalus glycyphyllos	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Athyrium filix-femina	.	+	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ballota nigra	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
Betula pendula	.	+	.	4	1	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Brachypodium sylvaticum	+
Bromopsis benekenii	+	+	+
Campanula trachelium	+	+	+	+	+	+	+	+	.	.	+
Caragana arborescens	+
Carex spicata	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.
Carex muricata	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	.
Cephalanthera damasonium	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Chaerophyllum temulum	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Chelidonium majus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
Circaea lutetiana	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Clinopodium vulgare	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cornus mas	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	1	.	.	.	.
Corylus avellana	.	.	.	.	.	.	.	+	.	.	.	1	+	+	.	.	+	+	+	1
Crataegus curvisepala	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	.	.	+	+	.
Cruciata glabra	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Dentaria glandulosa	+	.	2	2	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Dryopteris carthusiana	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dryopteris dilatata	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Epipactis helleborine	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	+	.	.	.	.	+
Euonymus europaea	.	+	.	+	.	.	+	+	.	.	2	+	+	+	+	+	+	+	+	+	+
Euonymus verrucosa	.	.	.	.	+	.	+	+	.	+	1	+	+	+	+	+	+	+	+	+	+
Euphorbia amygdaloides	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	+	+	.	.	.
Fagus sylvatica	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Festuca gigantea	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+
Fragaria vesca	+	+	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Fraxinus excelsior	+	+	.	.	.	.	2	.	4	3	2	+	+	1	+	.	.	.	3	2	
Galanthus nivalis	.	+	.	.	.	.	.	.	+	1	+	.	.	.	.	.	.	.	.	.	2
Galium aparine	.	.	.	+	.	.	.	.	.	.	+	2	.	.	1	1	+	1	.	.	
Galium intermedium	.	.	.	.	.	.	.	.	.	.	+	+	.	+	+	.	.	.	.	.
Geranium robertianum	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Geum urbanum	+	+	.	.	.	+	.	.	+	+	+	+	+	+	+	+	+	+	+	+	
Glechoma hirsuta	.	.	+	.	.	+	+	.	.	+	+	+	+	+	+	+	1	.	+	+	
Grossularia uva-crispa	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Hedera helix	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Hordelymus europaeus	.	+	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	+
Hypericum hirsutum	.	+	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Hypericum perforatum	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
Impatiens noli-tangere	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lapsana communis	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	+	+	.	.	.	.
Lathraea squamaria	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lathyrus niger	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	.
Lilium martagon	+	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+	.	.	.
Listera ovata	+	+	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Lonicera xylosteum	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Majanthemum bifolium	+	.	.	+	+	.	.	+	+	+	.	.	.	+	.	.	+	.	.	+	+
Melica uniflora	.	+	.	.	.	.	.	.	1	4	.	.	.	.	.	.	.	.	.	.	+
Moehringia trinervia	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Mycelis muralis	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Neottia nidus-avis	+	.	.	+	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.
Omphalodes scorpioides	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	.	+	.	.
Phalacrolooma annum	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Picea abies	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Platanthera chlorantha	.	+	.	.	+	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	+
Poa nemoralis	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	+
Quercus robur	1	1	5	4	2	.	2	.	.	.	5	4	5	4	3	4	4	4	4	2	2
Ranunculus cassubicus	+	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Rosa sp.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Rubus idaeus	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Rumex obtusifolius ssp. sylvestris	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Salvia glutinosa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Scilla bifolia	.	.	.	.	.	+	.	.	.	.	1	.	.	+	.	.	.	.	.	.	.
Swida sanguinea	.	.	.	.	.	.	+	.	.	.	1	+	1	1	+	+	+	+	1	+	
Taraxacum officinale	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	+	.	.	.	.
Torilis japonica	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
Ulmus minor	.	.	.	.	.	.	.	.	.	.	+	.	+	+	.	+	.	+	.	.	.
Veronica chamaedrys	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.
Viburnum lantana	.	.	.	.	.	.	+	.	.	+	+	+	+	+	+	+	+	+	+	+	+
Viola mirabilis	.	.	.	.	.	.	.	+	+	2	+	+	+	+	+	+	+	.	+	.	+
Viola odorata + V. suavis	+	.	.	.	+	+	+	.	+	2	+	+	+	+	+	.	.	.	.	.	+
Distribution of trees, shrubs and lianas by height																					
> 5.0 m																					
Acer campestre	.	.	.	.	.	.	.	.	.	.	3	1	.	+	2	.	.	+	.	.	.
Acer platanoides	1	.	.	.	.	.	3	.	1	3	.	.	.	.	2	.	.	.	.	.	2
Acer pseudoplatanus	.	.	.	.	1	.	.	1	1	.	.	.	.	.	.	.	2	.	.	.	.
Betula pendula	.	+	.	4	1	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Carpinus betulus	5	5	.	4	5	5	4	5	4	3	.	5	5	5	4	5	5	4	4	4	4
Cerasus avium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	1
Fagus sylvatica	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Fraxinus excelsior	.	.	.	.	.	.	2	.	4	3	2	.	.	.	.	.	.	.	.	3	2
Quercus robur	1	1	5	4	2	.	2	.	.	.	5	4	5	4	3	4	4	4	4	2	2

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<i>Tilia cordata</i>	1	1	3	.	2	.	.	3	1	.	.	1	2	.	4	.	3	+	.	2
0.5-5.0 m																				
<i>Acer campestre</i>	+	.	.	.	2	2	1	+	2	2	1	2	1	+	.
<i>Acer platanoides</i>	+	.	.	+	.	.	.	1	.	+	2	.	1	+	.	.
<i>Acer tataricum</i>	1	.	.	+	.	.	.	+	.	.
<i>Ajuga reptans</i>	+	+	.
<i>Carpinus betulus</i>	.	.	1	+	+	+	.	.	.	.	.	+	+	+	1	.	1	+	1	1
<i>Cerasus avium</i>	+	+	+	+	+	.	+	+	+	+	.
<i>Convallaria majalis</i>	+
<i>Cornus mas</i>	+	.	+	.	1	.	.	.	.	.
<i>Corylus avellana</i>	+	.	.	.	1	+	+	.	.	+	+	+	1	.
<i>Crataegus curvisepala</i>	+	+	+	+	+	.	+	.	.	.
<i>Euonymus europaea</i>	+	+	+	+	+
<i>Euonymus verrucosa</i>	+	.	+	1	.	.	+	+	+	+	+	.	.
<i>Fraxinus excelsior</i>	+	.	.	+	+	.	.	.	+	.
<i>Grossularia uva-crispa</i>	+
<i>Lonicera xylosteum</i>	+	+
<i>Picea abies</i>	+
<i>Sambucus nigra</i>	+
<i>Swida sanguinea</i>	1	+	+	1	+	+	+	+	1	.
<i>Tilia cordata</i>	.	.	2	.	+	+	.	+	+	+	+	.	+	+	+	1	1	+	+	.
<i>Ulmus glabra</i>	+	1	.	.	.	+	.	+	.	.
<i>Ulmus minor</i>	+	.	+	.	+	.	+	.	.
<i>Viburnum lantana</i>	+	+	+	+	+	+	+
< 0.5 m																				
<i>Acer campestre</i>	+	.	+	+	.	+	+	+	+	+	1	+	+	1	+	.
<i>Acer platanoides</i>	1	+	+	+	1	.	+	+	+	+	.	1	.	.	2	.	+	+	.	1
<i>Acer pseudoplatanus</i>	+	+	+	+	.	+	.	.
<i>Acer tataricum</i>	+	.	+	.	.	.	+	.
<i>Caragana arborescens</i>	+
<i>Carpinus betulus</i>	.	.	4	.	.	.	+	+	.	1	+	+	+	+	.	+	3	+	+	.
<i>Cerasus avium</i>	.	+	+	1	.	+	+	.	+	+	.	.	+	+	+
<i>Cornus mas</i>	+	.	.	+
<i>Corylus avellana</i>	+	+
<i>Crataegus curvisepala</i>	+	+	+	+	.
<i>Daphne mezereum</i>	+
<i>Euonymus europaea</i>	.	+	.	+	.	.	+	+	.	.	2	+	+	+	+	+	+	+	+	.
<i>Euonymus verrucosa</i>	+	.	+	.	.	+	+	+	+	.	.	+	+	+	+	+
<i>Fraxinus excelsior</i>	+	+	1	+	+	1	.	.	.	.	.	.
<i>Hedera helix</i>	+
<i>Quercus robur</i>	+
<i>Rosa sp.</i>	+
<i>Rubus idaeus</i>	.	+
<i>Sambucus nigra</i>	+
<i>Swida sanguinea</i>	+	.	.	.	1	.	1	+	+	+	.	+	+	+
<i>Tilia cordata</i>	+	.	+	+	.	.	+	+	+	.	+	+	.	+	.
<i>Ulmus glabra</i>	.	.	+	+	.	.	+	+	.	+	.	+	.	.	+	.	.	.	+	.
<i>Ulmus minor</i>	+	+	.
<i>Viburnum lantana</i>	+	.	.	.	+	+	+	+	+	+	+	+	+	+

- 1 – Onyshchenko V.A. (06.06.1995+06.05.1996), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, sq. 45;
 2 – Onyshchenko V.A. (18.06.1995+26.04.1996), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, sq. 28;
 3 – Onyshchenko V.A. (06.1995+27.04.1996), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, sq. 11;
 4 – Onyshchenko V.A. (06.1995+04.1996), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, sq. 30;
 5 – Onyshchenko V.A. (18.06.1995+26.04.1996), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, sq. 27;
 6 – Onyshchenko V.A. (05.1996), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Horodnytske forestry, sq. 48;
 7 – Onyshchenko V.A. (06.1996+23.04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Viknianske forestry, sq. 31;
 8 – Onyshchenko V.A. (09.06.1997+29.04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, sq. 32;
 9 – Onyshchenko V.A. (09.06.1995+28.04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, sq. 24;

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
D Isopyro-Carpinetum versus Galeobdolo-Carpinetum																												
Acer pseudoplatanus	+	1	+	.	+	1	.	+	.	1	.	.	.	+	2	.	2	3	2	1	.	.	2	2	+	4	.	
Anemone nemorosa	+	+	+	1	3	+	+	1	3	1	+	5	+	+	4	+	2	.	.	.	2	2	.	.	.	.	3
Arum bessenianum	+	+	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	+	.	.	.	+	+	.	.
Hepatica nobilis	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
Isopyrum thalictroides	3	4	3	+	1	4	4	4	4	2	4	.	+	4	+	3	3	1	1	+	3	+	.	+	+	2	+	
Polygonatum hirtum	+	+	+	+	+	+	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Ch Carpinion																												
Carpinus betulus	4	4	5	4	5	5	5	5	5	5	5	4	4	5	2	4	3	4	2	2	4	4	4	5	3	2	4	
Cerasus avium	.	1	.	2	.	.	.	.	.	1	1	.	.	1	.	.	1	2	+	+	+	1	+	.	2	1	
Stellaria holostea	1	+	+	2	1	+	.	2	4	1	.	.	.	.	+	+	+	+	+	+	4	1	+	+	1	1	+
Tilia cordata	.	1	.	2	1	1	.	1	1	.	1	1	2	1	+	4	3	4	5	2	.	.	.	.	.	1	1
Ch Fagetalia sylvaticae																												
Actaea spicata	.	+	+	.	.	+	.	.	+	+	.	.	.	+	+	+	.
Adoxa moschatellina	+	+	.	.	+	+	.	.	+	+	.	.
Asarum europaeum	1	3	2	2	1	1	+	.	+	2	1	+	+	1	+	2	2	1	2	1	+	2	2	2	1	2	+	
Carex sylvatica	.	+	.	+	+	+	.	+	+	+	+	+
Circaea lutetiana
Corydalis solida	+	2	1	+	3	+	+	1	1	1	.	+	+	+	+	1	+	.	.	.	.	.	.	.	+	1	+
Daphne mezereum
Dentaria bulbifera	2	3
Dryopteris filix-mas	+	+	.	1	+	.	+	+	2	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Epilobium montanum	+
Ficaria verna	+	.	+	.	+	.	+	.	+	+	+	2	.	+	+	+	4	.	+	+	2	1	+
Gagea lutea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gagea minima
Galium odoratum	1	+	+	1	1	+	+	.	+	1	+	+	+	+	+	1	.	.	.	.	.	.	.	.	.	.	.
Lamium galeobdolon	+	+	2	3	2	5	4	2	4	4	4	.	+	3	+	3	1	4	2	+	+	1	+	+	.	4	+	
Milium effusum	.	+	+	.	+	.	+	+	+	+
Mercurialis perennis	1	+	+	+	1	+	+	.	1	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Paris quadrifolia	+	+	+	.	+	+	+	.	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Polygonatum multiflorum	+	+	+	.	+	+	.	.	.	.	.	+	+	+	+	+	+	.	.	.	.	.	.	.	.	.	.
Pulmonaria obscura	.	+	+	1	+	+	+	.	+	1	.	+	+	.	+	1	+	1	1	.	.	.	1	1	+	+	+	
Ranunculus cassubicus	+	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Sanicula europaea	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Scrophularia nodosa	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Stachys sylvatica	.	.	.	.	+	+	+	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Ulmus glabra	+	+	+	.	.	+	+	.	+	.	1	2	+	+	.	.	.	1	2	2	1	1	.	3	+	2	+	
Viola reichenbachiana	+	+	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Other species																												
Acer campestre	+	.	.	.	.	+	.	.	+	+	+	.	1	+	.	+	1	.	.	2	+	.	+	.	.	.	.
Acer platanoides	2	1	+	+	+	.	1	2	+	+	1	3	2	1	4	1	2	3	2	3	2	3	+	+	+	+	2	
Aegopodium podagraria	4	3	2	3	5	2	1	3	2	3	1	+	+	3	+	4	2	2	2	+	+	+	+	.	3	+	+	
Ajuga reptans	+	.	+
Alliaria petiolata	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.
Anemone ranunculoides	+	2	+	.	+	+	+	+	+	1	+	+	+	+	1	1	3	4	.	1	+	2	+	1	.	2	+	
Anthriscus nitida
Anthriscus sylvestris
Arctium nemorosum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Athyrium filix-femina	+	.	.	.	+	+	.	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Betula pendula	.	4	.	1	.	.	.	.	.	.	1	.	.	1	.	.	.	4	.	.	.	.	.	.	.	.	.
Campanula patula	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Campanula trachelium	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Corylus avellana	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Crataegus curvisepala	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Dentaria glandulosa	+	2	.	.	+	2	+	+	1	+	1	.	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.
Dryopteris carthusiana	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Epipactis purpurata	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Euonymus europaea	.	.	.	.	.	.	.	.	+	+	+	+	+	+	.	+	+	+	+	+	+	+	+	+	+	+	+
Euonymus verrucosa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Fagus sylvatica	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Fragaria vesca	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Fraxinus excelsior	4	3	1	.	+	+	.	.	1	.	1	.	4	.	3	4	4	+	.	4	.	3	5	1	5	5	5	
Galanthus nivalis	+	+	1	+	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Galeopsis pubescens	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Galium aparine	+	.	+	.	.	+	+	.	.	1	.	+	.	1	.	1	+	+	.	+	1	+	.	.	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
Lonicera xylosteum	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Padus avium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Picea abies	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
Populus tremula	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	.	.	.	.
Sambucus nigra	+	.	.	.	.	.	+	.	.	.	.	4	.	+	+	.	.	+	.	.	1	.	2	1	4	+	+
Sambucus racemosa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
Swida sanquinea	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Tilia cordata	.	.	.	.	.	.	.	+	.	.	.	.	+	.	+	.	.	1	1	.	.	.	.	.	.	.	+
Ulmus glabra	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	1	2	2	.	1	.	3	+	2	+	+
Viburnum lantana	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Viburnum opulus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
< 0.5 m																												
Acer campestre	+	.	.	.	.	+	.	.	+	+	+	.	.	+	.	+	+	.	.	+	.	+	.	.	.	.	.
Acer platanoides	1	+	+	+	+	.	.	1	+	+	+	+	+	1	.	+	.	1	+	+	+	+	.	+	+	+	+	
Acer pseudoplatanus	+	.	+	.	+	+	.	+	.	+	.	.	.	+	.	.	.	.	.	+	+	.	.	+	1	+	+
Carpinus betulus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	+	.	+	+	.	.	+
Cerasus avium	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	+	+	.	+	+	+	.	.	+
Corylus avellana	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	+	.	+
Crataegus curvisepala	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
Daphne mezereum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Euonymus europaea	.	.	.	.	.	.	.	+	+	+	+	+	.	.	.	+	.	+	+	+	+	.	.	+	+	+	+
Euonymus verrucosa	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	+	.	+	+	.	+	.	+
Fraxinus excelsior	.	+	.	.	+	+	.	.	+	.	1	.	.	.	+	.	.	+	.	+	.	.	+	1	.	+	+	
Grossularia uva-crispa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.
Picea abies	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
Populus tremula	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	+	.	.	.	.	.	.	.
Quercus robur	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	.	+
Sambucus nigra	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	1	+	+	+
Swida sanquinea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	+
Tilia cordata	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Ulmus glabra	+	+	+	.	.	+	.	.	+	.	+	.	+	+	.	.	+	.	+	.	.	.	1	.	1	+	+	
Urtica dioica	+	.	.	+	+	.	.	.	+	+	+	+	+	.	+	.	+	+	+	.	+	4	+	+	2	+	.	
Urtica galeopsifolia	.	.	.	.	.	.	5	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Viburnum lantana	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Viburnum opulus	+	.	.

- 1 – Andrienko T.L. (06.06.1995) + Onyshchenko T.L. (06.05.1996), Krasnianske forestry, sq. 45 (Onyshchenko 1998: tab. 2, rel. 13);
- 2 – Onyshchenko V.A. (07.06.1995+06.05.1996), Krasnianske forestry, sq. 35 (Onyshchenko 1998: tab. 2, rel. 8);
- 3 – Onyshchenko V.A. (08.06.1995+06.05.1996), Horodnytske forestry, sq. 31 (Onyshchenko 1998: tab. 2, rel. 9);
- 4 – Stetsiuk N.O. (07.06.1995) + Onyshchenko V.A. (28.04.1997), Krasnianske forestry, sq. 35;
- 5 – Onyshchenko V.A. (19.06.1995+27.04.1997), Krasnianske forestry, sq. 8;
- 6 – Onyshchenko V.A. (19.06.1995+27.04.1997), Krasnianske forestry, sq. 9 (Onyshchenko 1998: tab. 2, rel. 14);
- 7 – Onyshchenko V.A. (19.06.1995+27.04.1997), Krasnianske forestry, sq. 11;
- 8 – Onyshchenko V.A. (19.06.1995+27.04.1997), Krasnianske forestry, sq. 11 (Onyshchenko 1998: tab. 2, rel. 1);
- 9 – Onyshchenko V.A. (20.06.1995+27.04.1997), Krasnianske forestry, sq. 11 (Onyshchenko 1998: tab. 2, rel. 16);
- 10 – Stetsiuk N.O. (09.06.1995) + Onyshchenko V.A. (04.1997), Horodnytske forestry, sq. 36 (Onyshchenko 1998: tab. 2, rel. 10);
- 11 – Onyshchenko V.A. (06.1995+27.04.1997), Krasnianske forestry, sq. 9;
- 12 – Onyshchenko V.A. (01.05.1996+25.04.1997), Viknianske forestry, sq. 8;
- 13 – Onyshchenko V.A. (05.05.1996), Krasnianske forestry, sq. 36, Yantseva hill;
- 14 – Onyshchenko V.A. (06.06.1995+06.05.1996), Krasnianske forestry, sq. 45;
- 15 – Onyshchenko V.A. (02.05.1996), Viknianske forestry, sq. 18;
- 16 – Stetsiuk N.O. (09.06.1995) + Onyshchenko V.A. (04.1997), Horodnytske forestry, sq. 21 (Onyshchenko 1998: tab. 2, rel. 11);
- 17 – Onyshchenko V.A. (19.06.1995+28.04.1997), Krasnianske forestry, sq. 30 (Onyshchenko 1998: tab. 2, rel. 12);
- 18 – Onyshchenko V.A. (01.05.1996+08.06.1997), Viknianske forestry, sq. 4;
- 19 – Onyshchenko V.A. (01.05.1996+11.08.1997), Viknianske forestry, sq. 11;
- 20 – Onyshchenko V.A. (05.05.1996), Krasnianske forestry, sq. 35, Yantseva hill;
- 21 – Onyshchenko V.A. (05.1996), Horodnytske forestry, sq. 40;
- 22 – Onyshchenko V.A., Nedorub O.Yu. (07.1996) + Onyshchenko V.A. (20.04.1997), Horodnytske forestry, sq. 16;
- 23 – Onyshchenko V.A. (25.04.1997+12.08.1997), Viknianske forestry, sq. 14 (Onyshchenko 1998: tab. 2, rel. 4);
- 24 – Onyshchenko V.A. (25.04.1997+12.08.1997), Viknianske forestry, sq. 8 (Onyshchenko 1998: tab. 2, rel. 6);
- 25 – Onyshchenko V.A. (25.04.1997+12.08.1997), Viknianske forestry, sq. 8;
- 26 – Onyshchenko V.A. (25.04.1997+11.08.1997), Viknianske forestry, sq. 9 (Onyshchenko 1998: tab. 2, rel. 7);
- 27 – Onyshchenko V.A. (30.04.1997+13.08.1997), Viknianske forestry, sq. 2, Hrymailiv forest.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
Other species																				
<i>Acer campestre</i>	+	+	1	+	+	+	+	.	1	1	+	1	+	+	.	.	+	+	1	
<i>Acer negundo</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	+	.
<i>Acer platanoides</i>	+	+	1	+	1	+	1	1	+	+	1	1	+	4	3	1	4	4	+	
<i>Aegopodium podagraria</i>	+	1	1	+	+	+	+	2	+	2	2	1	2	3	2	3	4	2	2	
<i>Ajuga reptans</i>	+	.	+	.	+	+	+	+	+	+	.	.	.	.	.	.	.	.	+
<i>Alliaria petiolata</i>	+	+	.	.	.	.	.	+	+	+	.	.	.	.	.	.	.	.	.
<i>Astragalus glycyphyllos</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Betula pendula</i>	.	4	.	.	1	.	.	.	.	.	.	1	.	.	.	.	.	.	.
<i>Brachypodium sylvaticum</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
<i>Campanula trachelium</i>	.	.	.	.	+	.	.	+	.	.	.	.	+	+	.	.	.	.	.
<i>Carex muricata</i>	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
<i>Carex pallescens</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Chaerophyllum temulum</i>	.	+	+	+	.	+	+	+	+	.	+	+	+	.	.	.	.	.	+
<i>Chamaerion angustifolium</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
<i>Circaea lutetiana</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	.	+
<i>Corylus avellana</i>	.	+	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	+
<i>Crataegus curvisepala</i>	.	+	.	+	.	+	.	.	+	.	+	.	.	.	.	.	+	.	+
<i>Dentaria glandulosa</i>	.	2	.	+	1	.	.	.	.	.	.	.	.	2	3	.	.	.	.
<i>Dryopteris carthusiana</i>	.	.	.	+	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.
<i>Epipactis purpurata</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.
<i>Euonymus europaea</i>	+	+	1	+	+	+	+	+	+	+	+	.	.	+	.	.	.	.	+
<i>Euonymus verrucosa</i>	+	+	+	+	+	+	.	+	+	+	1	.	.	+	+	.	+	+	+	
<i>Festuca gigantea</i>	+	.	+	+
<i>Fragaria vesca</i>	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Frangula alnus</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+
<i>Fraxinus excelsior</i>	3	3	4	1	2	1	+	4	4	3	3	+	+	1	2	+	.	.	+	
<i>Galanthus nivalis</i>	.	.	.	+	+	.	.	.	+	+	1	+	+	.	.	.	.	.	.
<i>Galeopsis sp.</i>	+	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.
<i>Galium aparine</i>	.	+	+	+	+	2	+	+	+	1	+	1	+	.	.	.	.	.	+
<i>Galium sylvaticum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Geranium robertianum</i>	.	+	.	.	+	.	+	+	+	.	+	+	+	.	.	+	+	.	+	
<i>Geum urbanum</i>	+	+	+	.	.	+	+	+	+	+	+	+	+	+	.	.	.	+	+	
<i>Glechoma hirsuta</i>	.	+	+	+	+	.	+	1	+	+	.	+	+	.	.	.	.	.	.
<i>Hypericum perforatum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Impatiens parviflora</i>	.	.	.	.	+	.	.	+	.	.	.	.	.	+	.	.	.	.	.
<i>Lapsana communis</i>	.	+	+	.	.	+	.	+	.	.	.	+	+	.	.	.	.	.	.
<i>Lilium martagon</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	.	+	+	+
<i>Listera ovata</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Lolium perenne</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Lysimachia nummularia</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Majanthemum bifolium</i>	.	.	.	+	+	+	+	+	+	.	+	.	.	.	.	.	.	.	+
<i>Melampyrum nemorosum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Moehringia trinervia</i>	.	.	.	.	+	+	.	+	+	.	.	.	.	+	.	.	.	.	+
<i>Mycelis muralis</i>	.	.	.	.	+	.	+	+	.	.	.	.	.	+	.	.	.	.	+
<i>Neottia nidus-avis</i>	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Omphalodes scorpioides</i>	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Oxalis acetosella</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Padus avium</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Phalacrolooma annuum</i>	.	+	.	.	.	.	.	.	.	+	+	+	.	+	.	.	.	.	.
<i>Picea abies</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Pinus sylvestris</i>	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Plantago major</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Poa annua</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Poa nemoralis</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Populus tremula</i>	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Prunella vulgaris</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Quercus robur</i>	3	.	3	5	4	4	1	.	2	3	3	4	5	3	3	4	.	2	1	
<i>Ranunculus cassubicus</i>	.	+	.	+	.	+	.	+	.	.	.	.	.	.	.	+	+	.	+
<i>Rosa sp.</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
<i>Rumex obtusifolius</i> ssp. <i>sylvestris</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.
<i>Salix capraea</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Salvia glutinosa</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+
<i>Sambucus racemosa</i>	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Stellaria media</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Swida sanguinea</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Taraxacum officinale</i>	.	.	.	.	.	.	.	+	+	.	.	+	.	+	.	.	.	.	.
<i>Torilis japonica</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
<i>Tussilago farfara</i>	+
<i>Ulmus minor</i>	2	3	3	5	.	.
<i>Veronica chamaedrys</i>	+
<i>Viburnum opulus</i>	+	+
<i>Viola odorata</i> + <i>V. suavis</i>	+	+	+	.	+	+	.	+	+	+	+	+	+	.	.	.	.	.	.
Distribution of trees and shrubs																				
by height																				
> 5.0 m																				
<i>Acer campestre</i>	.	.	+	.	+	.	.	.	1	+
<i>Acer platanoides</i>	.	.	1	.	1	3	.	.	3	3	.
<i>Acer pseudoplatanus</i>	.	1	.	.	1
<i>Betula pendula</i>	.	4	.	.	1	1
<i>Carpinus betulus</i>	4	4	4	2	4	4	5	5	5	4	4	5	2	.	5	4	4	5	5	
<i>Cerasus avium</i>	.	.	.	.	.	.	.	.	1	.	.	.	.	4	.	2	1	2	.
<i>Fraxinus excelsior</i>	3	3	4	1	2	.	.	4	4	3	2	.	.	1	2	.	.	.	.
<i>Pinus sylvestris</i>	2
<i>Populus tremula</i>	.	1
<i>Quercus robur</i>	3	.	3	5	4	4	1	.	2	3	3	4	5	3	3	4	.	2	1	
<i>Salix capraea</i>	1
<i>Tilia cordata</i>	.	1	2	.	1	2	.	.	1	2	3	.	.	2	.	2	.	2	4	
<i>Ulmus glabra</i>	1	1	1	.	.	.	.	.	+	1	.	.	.	.	.	.	.	.	.
<i>Ulmus minor</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	5	.	.
0.5-5.0 m																				
<i>Acer campestre</i>	+	+	+	+	.	.	+	.	.	1	1
<i>Acer negundo</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	+	+
<i>Acer platanoides</i>	+	.	+	+	.	+	+	1	+	+	.	.	.	4	3	1	2	3	.	
<i>Acer pseudoplatanus</i>	+	.	+	+	.	.	.	.	.	+	.	.	.	2	.	.	.	2	.
<i>Betula pendula</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Carpinus betulus</i>	.	+	+	3	+	+	+	+	+	+	+	.	.	+	.	+	.	.	.	
<i>Cerasus avium</i>	.	.	.	.	.	.	.	+	1	.	.	.	.	+	.	.	.	.	+
<i>Corylus avellana</i>	.	+	.	.	.	.	.	.	.	+	.	.	.	+	.	+	.	.	+
<i>Crataegus curvisepala</i>	.	+	.	+	.	.	.	.	.	+	.	.	.	.	.	.	+	.	.
<i>Euonymus europaea</i>	.	+	+	.	.	+	+	.	.	.	.	.	.	.	.	.	+	.	.
<i>Euonymus verrucosa</i>	+	+	+	.	+	+	.	+	+	+	+	.	+	+	+	+	+	.	.	
<i>Frangula alnus</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+
<i>Fraxinus excelsior</i>	.	.	.	.	.	.	.	+	.	.	.	.	.	+	+	+	.	.	.
<i>Padus avium</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
<i>Picea abies</i>	1
<i>Populus tremula</i>	+
<i>Sambucus nigra</i>	+	+	.	.	.	.	.	+	+	+	.	+	+	.	+	.	+	1	+
<i>Tilia cordata</i>	+	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.
<i>Ulmus glabra</i>	1	.	+	.	.	+	.	.	+	1	+	.	+	.	.	.	2	1	1	
<i>Ulmus minor</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	3	1	.	.
0.5-5.0 m																				
<i>Acer campestre</i>	+	+	1	+	.	+	+	.	+	+	+	1	+	+	.	.	+	+	+	
<i>Acer negundo</i>	+	+	.	.	+
<i>Acer platanoides</i>	+	+	1	+	+	+	1	+	+	+	1	1	+	+	+	+	+	+	+	
<i>Acer pseudoplatanus</i>	+	+	.	+	.	+	+	+	+	+	+	.	+	+	+	+	.	.	.	
<i>Betula pendula</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Carpinus betulus</i>	+	.	1	+	+	+	.	+	+	+	+	+	+	.	+	+	.	.	+	
<i>Cerasus avium</i>	+	+	+	+	+	.	.	+
<i>Corylus avellana</i>	+	+
<i>Crataegus curvisepala</i>	.	+	.	+	.	+	+	+
<i>Euonymus europaea</i>	+	+	1	+	+	+	+	+	+	+	+	.	+	+
<i>Euonymus verrucosa</i>	+	+	.	+	+	+	.	+	+	+	1	.	.	.	.	+	+	+	+
<i>Fraxinus excelsior</i>	1	+	+	+	.	1	+	1	+	+	2	+	+	.	.	.	.	.	.
<i>Populus tremula</i>	+
<i>Quercus robur</i>	+
<i>Rosa sp.</i>	+
<i>Sambucus nigra</i>	+	+	.	.	.	.	.	+	+	+	.	+	+	.	.	.	+	.	.
<i>Sambucus racemosa</i>	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
<i>Staphylea pinnata</i>
<i>Swida sanguinea</i>	+
<i>Tilia cordata</i>	+	.	.	.	+	+	.	.	+	+	+	+	+	+
<i>Ulmus glabra</i>	1	+	+	+	.	+	+	.	.	+	+	+	.	.	.	.	+	+	.
<i>Ulmus minor</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.
<i>Viburnum opulus</i>	+	+

- 1 – Onyshchenko V.A., Yuglichek L.S. (23.07.2004+01.05.2004), Davydkovetsky forest reserve (Yuglichek & Onyshchenko 2008: rel. 8);
 2 – Onyshchenko V.A. (23.07.2004+03.05.2004), Chervonozirske forestry (Yuglichek & Onyshchenko 2008: rel. 12);
 3 – Onyshchenko V.A. (23.07.2004+03.05.2004), Chervonozirske forestry (Yuglichek & Onyshchenko 2008: rel. 14);
 4 – Yuglichek L.S. (23.07.2004+03.05.2004), Chervonozirske forestry (Yuglichek & Onyshchenko 2008: rel. 22);
 5 – Onyshchenko V.A. (23.07.2005+03.05.2004), Chervonozirske forestry (Yuglichek & Onyshchenko 2008: rel. 13);
 6 – Onyshchenko V.A., Yuglichek L.S. (23.07.2004+01.05.2004), Davydkovetsky forest reserve (Yuglichek & Onyshchenko 2008: rel. 7);
 7 – Onyshchenko V.A., Yuglichek L.S. (23.07.2004+01.05.2004), Davydkovetsky forest reserve (Yuglichek & Onyshchenko 2008: rel. 9);
 8 – Onyshchenko V.A., Yuglichek L.S. (23.07.2004+01.05.2004), Davydkovetsky forest reserve (Yuglichek & Onyshchenko 2008: rel. 10);
 9 – Onyshchenko V.A. (23.07.2004+04.05.2004), Chervonozirske forestry (Yuglichek & Onyshchenko 2008: rel. 15);
 10 – Onyshchenko V.A. (23.07.2004+04.05.2004), Chervonozirske forestry (Yuglichek & Onyshchenko 2008: rel. 17);
 11 – Yuglichek L.S. (23.07.2004+03.05.2004), Chervonozirske forestry (Yuglichek & Onyshchenko 2008: rel. 19);
 12 – Yuglichek L.S. (23.07.2004+03.05.2004), Chervonozirske forestry (Yuglichek & Onyshchenko 2008: rel. 20);
 13 – Yuglichek L.S. (23.07.2004+03.05.2004), Chervonozirske forestry (Yuglichek & Onyshchenko 2008: rel. 21);
 14 – Yuglichek L.S. (22.09.2005+09.05.2004), south of Khmelnytsky (Yuglichek & Onyshchenko 2008: rel. 25);
 15 – Yuglichek L.S. (22.09.2005+09.05.2004), south of Khmelnytsky (Yuglichek & Onyshchenko 2008: rel. 27);
 16 – Yuglichek L.S. (22.09.2005+09.05.2004), south of Khmelnytsky (Yuglichek & Onyshchenko 2008: rel. 30);
 17 – Yuglichek L.S. (22.09.2005+09.05.2004), south of Khmelnytsky (Yuglichek & Onyshchenko 2008: rel. 28);
 18 – Yuglichek L.S. (22.09.2005+18.05.2004), south of Khmelnytsky (Yuglichek & Onyshchenko 2008: rel. 29);
 19 – Onyshchenko V.A. (23.07.2005+03.05.2004), Chervonozirske forestry (Yuglichek & Onyshchenko 2008: rel. 16).

Table 50. Subass. Isopyro thalictroidis-Carpinetum corydaletosum cavae Onyshchenko 1998 (points 21-23 on Fig. 12)

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Exposition	-	S W	-	SE	N W	-	-	E	SS W	-	-	-	-	E	-	-	-	S W	NE	N	-	N
Inclination	0	3	0	1	2	0	0	2	8	0	0	0	0	2	0	0	0	12	3	1	0	9
Tree layer	60	70	60	80	70	70	60	60	60	65	60	50	50	75	65	85	70	55	65	60	70	50
Shrub layer	8	10	3	12	7	20	15	5	30	18	0	15	20	0	25	25	12	20	5	20	10	2
Herb layer in summer relevé	1	50	50	25	12	20	65	65	40	50	50	40	40	45	25			40	25	10	15	40
Herb layer in spring relevé	50	35	40	50	55	40	45	60	50	40	90	90	90	60	50	10	35	35	45	45	50	30
Mosses	0	0	0	0	0	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0
Area (sq. m)	900	900	900		300	900	800	900	900	900	900	900	900	900	900	900	900	700	900	900	300	900
Number of vascular plants species	44	56	43	39	36	41	39	47	32	40	37	43	37	32	31	31	19	48	40	37	44	50
Point number on Fig. 12	22	22	22	22	22	22	22	22	22	22	22	22	22	21	21	23	23	22	22	22	22	22

D subass. corydaletosum cavae

<i>Allium ursinum</i>	3	1	.	+	+	.	2	+	.	.	+	5	+	.	.	.	.	+	.	+	1	.
<i>Corydalis cava</i>	+	1	3	3	3	2	3	2	1	1	+	2	1	+	3	2	.	1	+	3	2	2
<i>Lamium maculatum</i>	+	.	+	.	1	+	+	1	.	+	.	.	+	+	1	.	.	2	+	+	.	+
<i>Sambucus nigra</i>	2	2	+	2	2	+	2	+	+	.	.	.	.	.	1	1	1	3	+	+	.	.
<i>Urtica dioica</i>	1	2	+	2	1	+	5	4	+	+	+	+	+	1	.	.	+	2	+	1	+	+

D subass. caricetosum pilosae

<i>Campanula rapunculoides</i>	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	+	.	.	.	.
<i>Carex pilosa</i>	+	+	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	1	+	.	+	1

D var. Lathyrus vernus

<i>Lathyrus vernus</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
<i>Viola mirabilis</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+

D Isopyro-Carpinetum versus**Galeobdolono-Carpinetum**

<i>Acer pseudoplatanus</i>	.	+	.	1	+	1	+	+	.	.	+	2	.	.	.	+	.	+	.	+	1	.
<i>Arum besserianum</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	.	.	.	.	+	+	+	+	+
<i>Isopyrum thalictroides</i>	+	1	1	1	+	1	1	+	+	1	+	1	3	3	+	.	.	+	1	3	2	2
<i>Quercus petraea</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	.	.	.	.	.
<i>Polygonatum hirtum</i>	+	+	1	+	+	+	+	+	+	+	+	+	+	+	2	+	+	+	1	1	+	+

Ch Carpinion

<i>Carpinus betulus</i>	4	3	5	5	5	4	3	4	4	5	5	5	4	4	1	+	4	3	3	4	5	5
<i>Cerasus avium</i>	.	+	+	.	.	+	.	.	+	+	.	.	.	.	.	1	.	+	.	.	+	+
<i>Stellaria holostea</i>	+	2	4	+	+	.	.	.	.	+	.	+	2	+	1	.	.	2	2	+	2	2
<i>Tilia cordata</i>	+	2	1	1	.	2	.	.	.	.	.	.	.	+	+	+	.	3	4	1	+	1

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
Rosa sp.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+
Rubus caesius	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
Rubus idaeus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
Rumex obtusifolius ssp. sylvestris	.	.	.	.	.	.	.	.	+	.	.	.	+	+	.	.	.	.	.	.	.	.	.
Sambucus ebulus	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
Sambucus racemosa	.	+	.	.	.	.	.	.	.	.	+	.	2	.	.	.	.	.	.	.	.	.	.
Scilla bifolia	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	.	.	.	.	.	.
Scopolia carnioica	.	.	.	.	.	.	2	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Sorbus aucuparia	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
Sorbus torminalis	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Swida sanguinea	.	+	.	.	.	+	.	+	.	+	.	.	.	.	.	+	.	.	.	.	.	.	+
Taraxacum officinale	.	.	.	.	.	.	.	.	.	.	+	+	.	+	.	.	.	.	.	.	.	.	.
Torilis japonica	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Tussilago farfara	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Ulmus minor	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
Viburnum lantana	.	.	+	+	.	+	+	+	+	+	.	+	.	.	+	.	.	+	.	.	+	+	+
Viola odorata + V. suavis	+	+	1	+	+	+	+	+	.	1	+	+	+	+	+	.	.	+	.	+	1	+	+
Xanthoxalis fontana	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Distribution of trees and shrubs by height																							
> 5.0 m																							
Acer campestre	.	.	1	1	2	1	.	.	3	1	.	.	.	.	1	.	+	.	.	.	.	.	1
Acer platanoides	.	2	1	1	.	1	.	.	.	.	.	.	+	.	.	5	.	.	2	.	1	.	.
Acer pseudoplatanus	.	.	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
Carpinus betulus	4	3	5	5	5	3	3	4	4	5	5	3	4	4	1	.	3	3	3	4	5	5	
Fraxinus excelsior	4	4	.	.	.	3	4	4	.	2	1	2	2	.	5	.	.	1	3	4	3	1	
Quercus borealis	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Quercus petraea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	.	.	.	.	.
Quercus robur	.	.	1	.	2	4	1	2	.	2	4	4	3	4	.	4	4	3	3	.	.	.	
Tilia cordata	.	2	+	1	.	.	2	.	.	.	.	.	.	+	.	.	.	3	4	1	.	.	
Ulmus glabra	.	.	.	+	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
0.5-5.0 m																							
Acer campestre	.	+	+	+	+	2	+	+	.	1	.	+	2	+	3	1	+	+	+	+	+	+	+
Acer platanoides	+	+	+	.	.	+	+	1	1	1	+	+	2	.	.	3	+	.	+	2	1	.	.
Acer pseudoplatanus	.	+	.	.	.	.	+	+	.	.	.	2	.	.	.	.	.	.	.	+	.	.	.
Campanula trachelium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
Carpinus betulus	+	+	+	.	.	3	+	.	.	+	+	.	.	.	.	+	2	+	.	+	1	+	
Cerasus avium	.	+	.	.	.	+	.	.	+	+	.	.	.	.	.	1	.	.	.	.	.	+	+
Corylus avellana	.	.	1	1	.	1	2	+	1	.	.	.	.	.	.	.	.	.	1	2	1	1	1
Crataegus curvisepala	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	.	.	.	.
Crataegus sp.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Euonymus europaea	.	.	.	.	.	+	+	+	+	+	.	.	.	.	+	1	.	.	.	.	.	+	.
Euonymus verrucosa	.	.	.	.	.	+	.	+	+	+	.	.	.	.	+	.	.	.	+	.	.	.	.
Fraxinus excelsior	+	+	.	.	.	+	.	.	+	+	.	.	+	.	.	.	.	+	+	+	.	.	.
Rosa sp.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Sambucus nigra	2	2	+	2	2	+	2	+	+	.	.	.	.	.	1	1	1	3	+	+	.	.	.
Sambucus racemosa	.	+	.	.	.	.	.	.	.	.	.	+	2	.	.	.	.	.	.	.	.	.	.
Sorbus aucuparia	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
Sorbus torminalis	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Swida sanguinea	.	.	.	.	.	+	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+
Tilia cordata	+	+	1	+	.	.	+	.	.	.	.	.	.	.	+	.	.	+	1	+	+	+	1
Ulmus glabra	1	+	+	+	.	+	1	1	4	2	+	.	.	.	1	.	.	+	+	+	+	+	+
Ulmus minor	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Viburnum lantana	.	.	+	.	.	+	+	+	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.
< 0.5 m																							
Acer campestre	.	+	+	+	.	+	.	.	+	+	+	.	+	+	3	+	.	+	+	+	.	+	+
Acer platanoides	+	1	1	+	+	+	.	+	+	+	2	.	1	.	.	+	.	.	+	+	1	+	+
Acer pseudoplatanus	.	.	.	.	+	+	.	.	.	.	+	.	.	.	.	+	.	+	.	+	+	.	.
Carpinus betulus	1	+	1	+	.	1	+	+	+	1	3	4	2	+	.	.	+	+	+	+	1	3	3
Cerasus avium	.	.	+	.	.	+	.	.	.	+	.	.	.	.	.	+	.	+	.	.	+	.	+
Corylus avellana	.	.	+	+	+	.	+	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
Crataegus curvisepala	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	+	.	.	.	.	.
Euonymus europaea	+	+	+	+	+	2	+	+	+	+	.	+	+	+	+	1	+	+	+	+	+	+	+
Euonymus verrucosa	.	.	+	.	.	.	.	.	+	.	.	.	.	.	+	+	.	.	.	.	.	.	.
Fraxinus excelsior	+	1	+	+	1	2	+	+	1	2	+	2	.	+	+	+	.	+	2	1	+	+	+
Quercus borealis	+	+	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+
Quercus petraea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
<i>Quercus robur</i>	.	.	+	+	.	+	.	.	.	+	
<i>Rosa</i> sp.	+	+
<i>Rubus caesius</i>	+
<i>Rubus idaeus</i>	+
<i>Sambucus nigra</i>	+	+	+	+	1	.	+	.	+	.	.	.	.	.	.	+	.	+	+	.	.	.	.
<i>Sambucus racemosa</i>	+	.	+
<i>Sorbus aucuparia</i>	+
<i>Swida sanquinea</i>	.	+	.	.	.	+	+
<i>Tilia cordata</i>	+	.	+	.	+	.	+	+	+	+
<i>Ulmus glabra</i>	+	.	+	+	+	+	+	+	+	+	.	.	.	+	+
<i>Ulmus minor</i>	+
<i>Viburnum lantana</i>	.	.	+	+	.	+	.	.	+	+	.	+	.	.	+	.	.	+	.	.	.	+	+

- 1 – Onyshchenko V.A. (24.07.2003+30.04.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 27 (Onyshchenko & Lukash 2004: tab., rel. 3);
- 2 – Onyshchenko V.A. (24.07.2003+30.04.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 27 (Onyshchenko & Lukash 2004: tab., rel. 4);
- 3 – Onyshchenko V.A. (24.07.2003+30.04.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 26 (Onyshchenko & Lukash 2004: tab., rel. 6);
- 4 – Onyshchenko V.A. (25.07.2003+30.04.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 25 (Onyshchenko & Lukash 2004: tab., rel. 7);
- 5 – Onyshchenko V.A. (24.07.2003+30.04.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 24 (Onyshchenko & Lukash 2004: tab., rel. 8);
- 6 – Onyshchenko V.A., Lukash O.V. (25.07.2003+01.05.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 6 (Onyshchenko & Lukash 2004: tab., rel. 9);
- 7 – Onyshchenko V.A. (24.07.2003) + Onyshchenko V.A., Lukash O.V. (01.05.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 36 (Onyshchenko & Lukash 2004: tab., rel. 14);
- 8 – Onyshchenko V.A. (24.07.2003) + Onyshchenko V.A., Lukash O.V. (02.05.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 6 (Onyshchenko & Lukash 2004: tab., rel. 16);
- 9 – Onyshchenko V.A. (24.07.2003) + Onyshchenko V.A., Lukash O.V. (02.05.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 6 (Onyshchenko & Lukash 2004: tab., rel. 17);
- 10 – Onyshchenko V.A. (25.07.2003) + Onyshchenko V.A., Lukash O.V. (02.05.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 6 (Onyshchenko & Lukash 2004: tab., rel. 18);
- 11 – Onyshchenko V.A. (25.07.2003) + Onyshchenko V.A., Lukash O.V. (02.05.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 6 (Onyshchenko & Lukash 2004: tab., rel. 19);
- 12 – Lukash O.V. (23.07.2003+30.04.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 6 (Onyshchenko & Lukash 2004: tab., rel. 20);
- 13 – Lukash O.V. (23.07.2003+30.04.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 6 (Onyshchenko & Lukash 2004: tab., rel. 21);
- 14 – Onyshchenko V.A. (21.08.2004+24.04.2005), Cherkasy Region, Uman District, Sobkivske forestry;
- 15 – Onyshchenko V.A. (21.08.2004+24.04.2005), Cherkasy Region, Uman District, Sobkivske forestry, sq. 52;
- 16 – Onyshchenko V.A. (01.05.2006), Vinnytsia Region, Pishchanka District, near Rudnytsia;
- 17 – Onyshchenko V.A. (01.05.2006), Vinnytsia Region, Pishchanka District, near Rudnytsia;
- 18 – Onyshchenko V.A. (24.07.2003+30.04.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 27 (Onyshchenko & Lukash 2004: tab., rel. 5);
- 19 – Onyshchenko V.A. (25.07.2003+01.05.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 37 (Onyshchenko & Lukash 2004: tab., rel. 10);
- 20 – Onyshchenko V.A. (24.07.2003) + Onyshchenko V.A., Lukash O.V. (01.05.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 37 (Onyshchenko & Lukash 2004: tab., rel. 12);
- 21 – Lukash O.V. (24.07.2003) + Onyshchenko V.A., Lukash O.V. (01.05.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 36 (Onyshchenko & Lukash 2004: tab., rel. 13);
- 22 – Lukash O.V. (24.07.2003) + Onyshchenko V.A., Lukash O.V. (01.05.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 23 (Onyshchenko & Lukash 2004: tab., rel. 15).

Table 51. Subass. *Isopyro thalictroidis-Carpinetum brachypodietosum sylvatici* Onyshchenko 1998

Number in table	1	2	3	4	5	6	7	8
Exposition	SE	E	E	E	NEE		S	SSE
Inclination	27	10	10	40	30	30	15	18
Tree layer	65	95	85	85	80	90	80	85
Shrub layer	0	0	15	30	25	3	1	0
Herb layer in summer relevé	55	30	22	30	60	32	28	20
Herb layer in spring relevé	7	12		20	20	20	22	20
Mosses	0	0	0	0	0	0	0	0
Area (sq. m)	2000	1500	2500	1200	2500	2500	900	900

Number in table	1	2	3	4	5	6	7	8
Number of vascular plants species	45	58	44	74	67	65	50	57
Point number on Fig. 12	4	4	4	4	4	4	6	6
Nomenclatural type								*

D subass. brachypodietosum sylvatici

Brachypodium sylvaticum	+	2	+	+	+	.	.	+
Bromopsis benekenii	1	.	.	+	+	+	+	.
Carex muricata	+	.	.	+	+	+	+	+
Clematis recta	.	+	+	.	+	+	.	.
Cruciata glabra	.	+	.	.	.	.	1	1
Hylotelephium polonicum	.	.	.	.	+	+	.	.
Laserpitium latifolium	.	.	.	+	+	.	.	.
Lathyrus niger	+	+	+	.	.	+	+	+
Lonicera xylosteum	.	.	.	2	1	+	.	+
Melampyrum nemorosum	+	+	.	.	.	+	+	.
Melica picta	1	.	.	.	+	.	+	+
Scutellaria altissima	.	.	.	.	+	+	+	+
Poa nemoralis	+	+	+	+	+	+	+	+
Pyrethrum corymbosum	+	+	.	.	+	.	+	+
Vincetoxicum hirundinaria	.	.	.	.	+	.	+	.
Viburnum lantana	+	+	+	+	+	+	+	+
Viburnum opulus	.	.	1	+	+	+	.	.
Vicia sepium	.	+	+	+	+	+	.	+
Viola hirta	.	+	+	.	.	.	.	.

D subass. caricetosum pilosae

Campanula rapunculoides	+	.	+	+	+	+	+	+
Carex digitata	.	.	+	+	+	1	.	.
Carex pilosa	.	.	.	.	.	.	+	1
Convallaria majalis	+	+	+	+	+	+	3	2
Dactylis glomerata s.l.	+	.	.	.	+	+	+	+
Melica nutans	.	+	.	.	+	.	+	+

D subass. corydaletosum cavae

Corydalis cava	+	+	.	+	.	.	+	+
Geranium phaeum	.	.	.	+	.	.	.	+
Lamium maculatum	.	+	.	+	+	.	.	+
Sambucus nigra	.	.	.	.	.	+	.	.

D Isopyro-Carpinetum versus**Galeobdolo-Carpinetum**

Acer pseudoplatanus	+	.	.	4	2	1	.	.
Anemone nemorosa	.	.	.	2	.	.	.	.
Arum besserianum	+	.	.	+	+	+	+	+
Hepatica nobilis	.	1	+	.	.	.	.	+
Isopyrum thalictroides	.	.	.	1	+	.	.	.
Polygonatum hirtum	.	+	.	1	.	+	+	+

Ch Carpinion

Carpinus betulus	4	5	4	1	+	5	5	5
Cerasus avium	.	+	2	.	1	+	+	+
Stellaria holostea	.	1	.	+	+	+	2	2
Tilia cordata	.	+	2	4	3	1	.	.

Ch Fagetalia sylvaticae

Actaea spicata	.	.	+	+	+	.	.	.
Adoxa moschatellina	.	+	.	+	+	.	.	.
Anemone ranunculoides	1	1	+	2	+	.	.	+
Asarum europaeum	3	2	+	1	+	2	+	+
Carex sylvatica	.	.	+	.	.	.	.	.
Corydalis solida	1	+	.	1	+	+	+	+
Daphne mezereum	.	.	.	+	+	+	.	.
Dentaria bulbifera	.	.	.	.	.	+	.	.
Dryopteris filix-mas	.	.	.	+	.	.	.	.
Ficaria verna	+	+	+	+	.	.	.	+
Gagea lutea	.	.	.	+	.	.	.	.
Galium odoratum	+	2	.	1	1	+	+	+
Lamium galeobdolon	2	1	.	+	+	2	+	.
Lathyrus vernus	+	+	+	+	2	2	.	.
Mercurialis perennis	1	.	.	+	+	1	.	.
Milium effusum	+	.	.	+	+	.	.	+
Paris quadrifolia	.	.	.	+	+	.	.	.
Polygonatum multiflorum	+	+	+	+	.	+	.	+

Number in table	1	2	3	4	5	6	7	8
<i>Sanicula europaea</i>	.	.	.	+	.	+	.	.
<i>Pulmonaria obscura</i>	+	1	+	+	+	+	+	+
<i>Stachys sylvatica</i>	.	+	.	.	.	.	.	.
<i>Ulmus glabra</i>	1	+	3	1	+	.	.	+
<i>Viola reichenbachiana</i>	.	.	.	.	.	+	+	+
Other species								
<i>Acer campestre</i>	+	.	1	+	2	+	1	+
<i>Acer platanoides</i>	2	+	2	3	2	2	+	+
<i>Acer tataricum</i>	.	.	.	.	.	.	+	+
<i>Aegonychon purpureocaeruleum</i>	.	.	+	.	.	.	.	.
<i>Aegopodium podagraria</i>	.	2	+	2	4	+	.	+
<i>Ajuga reptans</i>	.	+	+	+	.	+	+	+
<i>Alliaria petiolata</i>	3	.	.	+	.	.	+	+
<i>Allium ursinum</i>	+	.	.	+	+	.	.	.
<i>Anthriscus nitida</i>	.	.	.	+	+	.	.	.
<i>Arctium nemorosum</i>	.	.	.	.	+	.	.	.
<i>Asparagus officinalis</i>	.	.	.	.	.	.	+	.
<i>Asplenium trichomanes</i>	.	.	.	+	.	+	.	.
<i>Astragalus glycyphyllos</i>	.	.	+	.	.	.	.	.
<i>Betonica officinalis</i>	.	+	.	.	.	.	.	.
<i>Campanula persicifolia</i>	.	.	.	.	.	+	.	.
<i>Campanula trachelium</i>	+	+	+	+	+	+	+	+
<i>Carex brevicollis</i>	.	.	.	.	.	.	+	.
<i>Carex montana</i>	+	.	.	.	.	.	.	.
<i>Cephalanthera damasonium</i>	.	+	.	.	.	.	+	.
<i>Chaerophyllum aromaticum</i>	.	.	.	.	+	.	.	.
<i>Chaerophyllum temulum</i>	.	+	.	.	.	.	.	.
<i>Chrysosplenium alternifolium</i>	.	.	.	+	.	.	.	.
<i>Cornus mas</i>	.	.	.	.	.	.	1	+
<i>Corylus avellana</i>	+	4	+	3	3	+	.	+
<i>Crataegus curvisepala</i>	.	+	.	.	.	+	+	+
<i>Cystopteris fragilis</i>	.	.	.	+	.	.	.	.
<i>Dentaria glandulosa</i>	.	.	.	+	.	.	.	.
<i>Epipactis helleborine</i>	.	.	.	.	+	+	.	.
<i>Euonymus europaea</i>	.	+	1	+	+	.	+	+
<i>Euonymus verrucosa</i>	+	+	+	+	1	+	+	+
<i>Euphorbia angulata</i>	.	+	.	.	.	.	.	.
<i>Fallopia dumetorum</i>	.	+	.	.	.	+	.	.
<i>Fragaria vesca</i>	.	+	.	.	.	+	.	.
<i>Fraxinus excelsior</i>	2	+	5	2	4	3	+	.
<i>Galanthus nivalis</i>	+	.	.	.	.	+	.	.
<i>Galeopsis pubescens</i>	.	.	.	.	.	+	.	.
<i>Galium aparine</i>	.	.	.	+	.	.	.	+
<i>Galium intermedium</i>	.	.	.	.	.	.	.	+
<i>Geranium robertianum</i>	.	.	.	+	+	+	.	.
<i>Geum urbanum</i>	.	+	.	+	+	+	+	+
<i>Glechoma hirsuta</i>	+	1	+	1	1	+	+	+
<i>Grossularia uva-crispa</i>	.	.	.	+	.	.	.	.
<i>Hordelymus europaeus</i>	+	.	.	.	.	+	.	.
<i>Iris graminea</i>	.	.	.	.	+	.	.	.
<i>Lapsana communis</i>	.	+	.	+	.	+	+	.
<i>Lathraea squamaria</i>	.	.	+	.	.	.	.	.
<i>Listera ovata</i>	.	.	.	+	.	.	.	.
<i>Majanthemum bifolium</i>	.	.	+	+	+	.	.	.
<i>Melandrium dioicum</i>	.	.	.	1	.	.	.	.
<i>Melittis sarmatica</i>	.	.	.	.	+	.	.	.
<i>Omphalodes scorpioides</i>	.	.	.	+	.	.	.	.
<i>Populus tremula</i>	.	.	+	.	.	.	.	.
<i>Quercus robur</i>	3	1	+	+	1	2	4	5
<i>Ranunculus cassubicus</i>	+	+	.	+	+	+	+	+
<i>Ranunculus lanuginosus</i>	.	.	.	+	.	.	.	.
<i>Rubus caesius</i>	.	+	+	.	.	.	.	.
<i>Salvia glutinosa</i>	.	.	.	+	+	+	.	.
<i>Swida sanguinea</i>	+	+	+	+	2	+	+	.
<i>Taraxacum officinale</i>	.	+	.	.	.	.	.	.
<i>Thalictrum aquilegifolium</i>	.	+	.	.	.	.	.	.
<i>Ulmus minor</i>	.	2	.	.	+	.	1	+
<i>Urtica dioica</i>	.	.	+	.	.	.	.	.

Number in table	1	2	3	4	5	6	7	8
Veronica chamaedrys	.	.	.	.	.	.	.	+
Veronica hederifolia	.	.	.	.	.	.	.	+
Vinca minor	.	.	.	.	.	+	.	.
Viola mirabilis	+	+	+	1	+	1	+	+
Viola odorata + V. suavis	+	.	.	.	.	+	.	.
Distribution of trees, shrubs and lianas								
by height								
> 5.0 m								
Acer campestre	.	.	.	+	2	+	1	.
Acer platanoides	2	.	2	3	2	2	.	.
Acer pseudoplatanus	.	.	.	4	2	1	.	.
Acer tataricum	.	.	.	.	.	.	+	.
Carpinus betulus	4	5	4	1	+	5	5	5
Cerasus avium	.	.	1	.	1	.	.	.
Corylus avellana	.	3	.	.	1	.	.	.
Crataegus curvisepala	.	.	.	.	.	.	.	+
Fraxinus excelsior	2	.	5	2	4	3	.	.
Quercus robur	3	1	.	.	1	2	4	5
Tilia cordata	.	.	.	4	3	1	.	.
Ulmus glabra	1	.	2	1	+	.	.	.
Ulmus minor	.	2	.	.	.	.	1	.
0.5-5.0 m								
Acer campestre	.	.	1	.	.	.	+	+
Acer platanoides	.	+	+	+	+	.	+	+
Acer pseudoplatanus	.	.	.	+	.	.	.	.
Acer tataricum	.	.	.	.	.	.	+	.
Carpinus betulus	+	.	1	+	.	+	+	.
Cerasus avium	.	+	1	.	+	.	+	+
Cornus mas	.	.	.	.	.	.	1	+
Corylus avellana	+	3	+	3	3	+	.	.
Crataegus curvisepala	.	.	.	.	.	+	.	.
Euonymus europaea	.	+	+	.	.	.	.	.
Euonymus verrucosa	.	+	+	.	1	+	+	.
Fraxinus excelsior	.	+	+	.	+	.	+	.
Lonicera xylosteum	.	.	.	2	1	+	.	+
Rubus caesius	.	.	+	.	.	.	.	.
Swida sanguinea	+	+	.	.	2	.	+	.
Tilia cordata	.	+	1	+	+	.	.	.
Ulmus glabra	.	+	1	.	+	.	.	+
Ulmus minor	.	.	.	.	+	.	+	+
Viburnum lantana	+	+	+	+	+	+	+	.
< 0.5 m								
Acer campestre	+	.	.	+	+	+	+	+
Acer platanoides	+	+	1	+	+	1	+	+
Acer pseudoplatanus	+	.	.	+	.	+	.	.
Acer tataricum	.	.	.	.	.	.	+	+
Carpinus betulus	+	+	+	+	+	+	+	.
Cerasus avium	.	+	+	.	+	+	.	+
Corylus avellana	.	+	+	+	.	+	.	+
Crataegus curvisepala	.	+	.	.	.	.	+	+
Daphne mezereum	.	.	.	+	+	+	.	.
Euonymus europaea	.	.	1	+	+	.	+	+
Euonymus verrucosa	+	+	.	+	+	+	+	+
Fraxinus excelsior	.	.	+	+	+	+	+	.
Grossularia uva-crispa	.	.	.	+	.	.	.	.
Lonicera xylosteum	.	.	.	+	.	+	.	.
Populus tremula	.	.	+	.	.	.	.	.
Quercus robur	.	+	+	+	+	.	.	+
Rubus caesius	.	+	.	.	.	.	.	.
Sambucus nigra	.	.	.	.	.	+	.	.
Swida sanguinea	.	+	+	+	.	+	.	.
Tilia cordata	.	.	1	.	.	.	.	.
Ulmus glabra	.	.	1	.	+	.	.	.
Viburnum lantana	.	+	+	+	.	+	+	+
Viburnum opulus	.	.	1	+	+	+	.	.

- 1 – Andrienko T.L. (05.07.1996) + Onyshchenko V.A. (15.04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Horodnytske forestry, sq. 31, Bokhit hill (Onyshchenko 1998: tab. 2, rel. 25);
 2 – Onyshchenko V.A. (07.08.1997+24.04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Viknianske forestry, sq. 50, Luchansky forest (Onyshchenko 1998: tab. 2, rel. 29);
 3 – Onyshchenko V.A. (07.08.1997+24.04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Viknianske forestry, sq. 50, Luchansky forest (Onyshchenko 1998: tab. 2, rel. 30);
 4 – Onyshchenko V.A. (13.06.1997+26.04.1997+02.08.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, sq. 57 (Onyshchenko 1998: tab. 2, rel. 26);
 5 – Onyshchenko V.A. (13.06.1997+26.04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, Pushcha (Onyshchenko 1998: tab. 2, rel. 27);
 6 – Onyshchenko V.A., Panchenko S.M. (02.09.1997) + Onyshchenko (26.04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, Pushcha, slope of Slipyi Yar gully (Onyshchenko 1998: tab. 2, rel. 28);
 7 – Onyshchenko V.A. (02.09.1997+26.04.1997), Khmelnytsky Region, Kamianets-Podilsky District, Panivetske forestry (Onyshchenko & Lubinska 2006: tab. 1, rel. 13);
 8 – Onyshchenko V.A. (02.09.1997+26.04.1997), Khmelnytsky Region, Kamianets-Podilsky District, Panivetske forestry (Onyshchenko & Lubinska 2006: tab. 1, rel. 14).

Table 52. Intermediate relevés between subass. *Isopyro thalictroidis-Carpinetum caricetosum pilosae* Onyshchenko 1998 and subass. *Isopyro thalictroidis-Carpinetum corydaletosum cauae* Onyshchenko 1998

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Exposition	E	-	S	SS E	N NE	NE E	N	-	-	0	N	-	S W	S	W	-	S	NE E	-	-	-	SE	-	-
Inclination	-1	0	2	4	2	15	0	0	0	0	5	0	2	4	15	0	-1	12	0	0	0	2	0	0
Tree layer	85	80	80	60	95	80	90	90	80	85	90	95	80	85	70	85	90	80	80	85	90	85	65	70
Shrub layer	0	0	0	0	0	0	10	0	0	5	0	10	15	7	30	0	8	3	15	35	0	0	10	0
Herb layer in summer relevé	40	50	30	80	12				60	30	35	15	70	80	80		27	15	40	10	30	30	35	10
Herb layer in spring relevé	57	90	30	65	35	60	80	80	45	20	50	30	60	80	80	30	17	10	40	20	75	50	37	62
Mosses	0		0	0		0		0	0	0			0	0	0			0	0	0	0	0	0	0
Area (sq. m)	2500	2500	2500	2000	1200	2500	2500	2500	2500	2500	2500	2500	900	500	900	2500	2500	900	900	900	525	400	900	900
Number of vascular plants species	53	46	33	39	31	37	31	47	31	30	39	36	50	45	56	32	44	41	51	34	30	50	38	40
Point number on Fig. 12	4	4	4	4	4	4	4	4	4	4	4	4	10	10	10	4	4	6	6	21	21	1	22	22

D subass. caricetosum pilosae

<i>Carex digitata</i>	.	.	.	+	.	+	.	.	+	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.
<i>Carex pilosa</i>	+	1	+	2	+	.	.	1	+	.	+	.	.	.	.	.	.	.	+	.	.	3	2	.
<i>Campanula rapunculoides</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1
<i>Convallaria majalis</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	+	1	.	.	.	.	.
<i>Dactylis glomerata</i> s.l.	.	+	+	.	.	.	.	+	.	.	.	.	.	.	+	+	.	+	+	.	.	+	.	.
<i>Melica nutans</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	+	.	.
<i>Vicia sepium</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+

D subass. corydaletosum cauae

<i>Corydalis cava</i>	2	.	.	3	.	.	.	.	.	+	.	.	.	.	.	.	.	2	.	.	1	2	.	
<i>Geranium phaeum</i>	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	+	.	.	.	.	.	+	.	.
<i>Lamium maculatum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.
<i>Sambucus nigra</i>	.	+	.	+	.	.	+	.	.	.	.	.	.	.	.	.	1	.	+	.	.	.	.	.
<i>Urtica dioica</i>	+	+	+	.	.	+	.	+	.	.	.	.	+	.	+	.	+	+	.	.	.	.	.	+

D Isopyro-Carpinetum versus Galeobdolon-Carpinetum

<i>Acer pseudoplatanus</i>	+	.	.	2	.	+	1	.	+	+	1	.	+	+	+	1	1	.	.	.	.	3	+	2
<i>Anemone nemorosa</i>	2	5	1	+	3	.	3	3	2	3	2	2	.	.	.	3	.	.	.	.	.	4	.	.
<i>Arum besserianum</i>	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	.
<i>Hepatica nobilis</i>	+	.	.	.	+	.	.	.	.	.	.	.	1	.	2	.	.	.	.	.	.	+	.	.
<i>Isopyrum thalictroides</i>	4	3	3	3	1	+	+	4	3	.	3	1	.	+	+	2	.	1	.	1	2	1	1	+
<i>Polygonatum hirtum</i>	+	+	+	+	+	+	.	+	+	+	+	.	.	.	.	+	+	+	1	+	+	.	1	+

Ch Carpinion

<i>Carpinus betulus</i>	4	5	4	4	4	4	5	5	5	5	5	5	4	5	5	4	5	5	5	5	5	4	4	4
<i>Cerasus avium</i>	1	1	.	.	+	.	1	.	1	+	+	+	+	+	+	.	2	+	+	+	+	.	.	+
<i>Stellaria holostea</i>	+	4	2	2	+	4	+	+	2	1	1	+	3	4	+	+	+	+	2	1	.	+	3	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
<i>Tilia cordata</i>	2	.	.	1	2	.	+	2	.	.	+	.	+	1	2	+	.	+	+	3	.	2	2	.	
Ch Fagetalia sylvaticae																									
<i>Actaea spicata</i>	+	+	.	+	.	+
<i>Adoxa moschatellina</i>	.	1	+	+	+	.	.	+	.	+	.	+
<i>Anemone ranunculoides</i>	1	.	1	+	+	1	3	+	1	+	+	2	.	.	.	+	1	1	1	+	1	+	2	1	
<i>Asarum europaeum</i>	2	+	2	3	.	1	3	1	3	1	2	2	2	2	4	+	2	+	+	+	+	+	1	.	
<i>Carex sylvatica</i>	+	+	.	.	.	.	.	.	+	+	+	+	+	+	+	.	.	.	.	.	.	.	.	+
<i>Circaea lutetiana</i>	.	.	.	.	.	.	+	.	.	.	.	.	+	.	+	.	+	.	.	.	.	.	.	.
<i>Corydalis solidica</i>	1	+	+	+	2	+	.	+	+	.	1	1	.	.	.	.	+	+	+	3	5	.	1	4
<i>Dentaria bulbifera</i>	.	+	.	1	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	2	.
<i>Dryopteris filix-mas</i>	+	+	+	.	+	.	.	+	+	+	+	+	.	+	+	+	+	.	.	.	.	.	+	.
<i>Epilobium montanum</i>	+	+	+
<i>Ficaria verna</i>	.	1	+	.	+	+	+	+	+	+	.	+	3	.	.	+	1	+	+	.	.	2	+	3	
<i>Gagea lutea</i>	+	+	+	+	+	+	+	+	+	.	+	1	+	+	+	+	+	+	+	+	+	+	+	2	
<i>Gagea minima</i>	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	+	.	1
<i>Galium odoratum</i>	+	1	+	+	.	+	1	+	.	.	+	+	3	3	.	.	+	.	1	+	.	1	+	.	
<i>Lamium galeobdolon</i>	+	3	+	+	+	+	.	+	4	1	2	1	3	2	2	+	2	+	2	+	1	1	+	+	
<i>Lathyrus vernus</i>	+	+	.	+	.	.	+	+	+	+	+	1	+	2	+	+	.	+	.	.	.	+	.	.	
<i>Mercurialis perennis</i>	2	+	.	3	+	3	.	+	.	.	+	.	.	.	.	.	.	.	+	.	.	+	.	+
<i>Milium effusum</i>	+	1	+	.	.	.	.	+	.	.	.	.	+	+	+	.	.	.	.	.	.	.	+	+
<i>Paris quadrifolia</i>	+	+	+	+	.	.	.	.	.	+	+	+	.	+	+	+	+	.	.	.	.	.	.	.
<i>Polygonatum multiflorum</i>	+	+	+	+	+	.	+	+	+	.	+	+	+	.	+	.	+	.	.	+	.	+	+	.	
<i>Pulmonaria obscura</i>	+	+	+	+	+	+	+	+	1	+	.	+	2	1	+	.	+	+	+	.	.	+	+	.	
<i>Sanicula europaea</i>	.	.	.	.	.	+	+	.	+	+	.	1	+	.	.	+	.	.	.	.	.	.	.	.
<i>Scrophularia nodosa</i>	+	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Stachys sylvatica</i>	+	+	.	+	+	+	+
<i>Ulmus glabra</i>	+	.	+	+	.	+	.	.	.	.	+	+	+	2	+	.	2	.	.	+	.	.	+	+
<i>Viola reichenbachiana</i>	.	+	.	.	.	+	+	+	.	+	+	+	1	+	+	+	+	+	+	.	1	+	+	1	
Other species																									
<i>Acer campestre</i>	+	.	+	+	1	1	.	.	.	.	.	.	+	+	+	+	.	1	3	1	+	2	1	.
<i>Acer negundo</i>
<i>Acer platanoides</i>	1	+	+	+	3	1	+	+	2	2	+	+	1	+	4	+	1	+	.	4	.	+	2	1	
<i>Acer tataricum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
<i>Aegopodium podagraria</i>	2	2	2	3	1	.	1	4	.	+	3	+	.	.	+	1	+	.	.	+	4	2	1	.	
<i>Ajuga reptans</i>	+	+	+	.	.	.	.	+	.	+	.	.	+	+	+	.	.	+	+	.	.	+	.	+
<i>Alliaria petiolata</i>	.	+	.	.	.	+	.	.	.	.	.	.	.	+	+	.	.	.	+	+	.	.	.	+
<i>Allium ursinum</i>	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Anthriscus nitida</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
<i>Anthriscus sylvestris</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
<i>Aposeris foetida</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
<i>Arctium lappa</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
<i>Aruncus dioicus</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Athyrium filix-femina</i>	+	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+	.	+	+	+	+	.
<i>Ballota nigra</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Betula pendula</i>	1	.	.	3	.	.	.	1	.	.	1	.	2	2	1	.	.	.	.	.	.	.	.	.
<i>Brachypodium sylvaticum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Bromopsis benekenii</i>	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
<i>Campanula persicifolia</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
<i>Campanula trachelium</i>	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.	.	.
<i>Carex brizoides</i>	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Carex spicata</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.
<i>Carex muricata</i>	+
<i>Carex remota</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Chaerophyllum temulum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	+	.	.	.	.
<i>Chamaerion angustifolium</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Corylus avellana</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	+	+	.	.	.	+	1	.
<i>Crataegus curvisepala</i>	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	+	+	+	+	+	.
<i>Daphne mezereum</i>	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Dentaria glandulosa</i>	+	+	.	1	+	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	+	.
<i>Dryopteris carthusiana</i>	.	+	.	.	.	.	.	+	.	.	.	.	+	.	+	.	+	.	.	.	.	.	.	.
<i>Euonymus europaea</i>	.	.	.	.	.	+	+	.	.	.	.	.	.	+	+	.	+	+	+	+	1	+	+	.
<i>Euonymus verrucosa</i>	.	.	.	.	+	+	.	+	+	.	.	+	+	+	.	+	+	+	+	+	1	+	.	.
<i>Euphorbia amygdaloides</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+
<i>Fagus sylvatica</i>	.	.	.	.	.	.	.	.	.	2	.	1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Festuca gigantea</i>	.	.	.	.	.	.	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	+	+
<i>Fragaria vesca</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	+	.	.	.	.	.	.	+	.
<i>Fraxinus excelsior</i>	4	.	3	2	2	4	+	.	.	+	2	5	3	.	1	1	2	.	.	1	.	.	3	4	
<i>Galanthus nivalis</i>	+	.	2	+	+	1	+	1	+	.	.	.	+	.	1	1

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Galeopsis pubescens	+
Galeopsis sp.	+
Galium aparine	.	+	.	.	+	.	.	+	+	.	+	.	.	+	1	+	+	+	.	.
Galium intermedium	+	+	.	.	+	.
Geranium robertianum	+	+	+	.	+	+	+	.	.	+	.
Geranium sanguineum	+
Geum urbanum	+	+	.	.	.	+	.	+	.	+	.	+	2	+	+	.	+	+	+	+	+	+	.	+
Glechoma hirsuta	+	.	+	.	.	+	+	+	+	.	+	+	1	+	1	+	+	.	1
Hedera helix	+
Hordelymus europaeus	+	.	.	+
Hypericum hirsutum	+
Impatiens noli-tangere	+	+
Impatiens parviflora	+
Lapsana communis	+	+	.	.	.	+
Lathraea squamaria	+	.
Lathyrus niger	+	.	.	.	+
Leonurus cardiaca	+	.	.
Lilium martagon	+	.	.	.
Listera ovata	+	+	+	+
Lolium perenne	+
Lonicera xylosteum	+	+	.	.	.
Luzula multiflora	+
Majanthemum bifolium	+	+	.	+	+	+	+	+	2	.	.	.	.	.	.	.	+
Melica uniflora	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Melittis sarmatica	+	+	+
Moehringia trinervia	+	+
Mycelis muralis	+	+
Neottia nidus-avis	+	+
Omphalodes scorpioides	+	+	.	+
Oxalis acetosella	+
Padus avium	+
Parthenocissus quinquefolia	+	.
Phalacrogloma annuum	+	+	+
Picea abies	+
Poa nemoralis	+	+	+	.	+	+	+	.	.	+
Polygonum aviculare	+
Populus tremula	1	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
Prunella vulgaris	+
Quercus robur	.	1	4	.	4	.	2	1	3	2	.	+	3	4	2	4	3	2	4	2	5	.	+	2
Ranunculus cassubicus	.	+	+	.	+	+	.	+	.	+	+	+	+	+	+	+	.	+	+	.	.	+	.	
Ranunculus lanuginosus	+	.
Robinia pseudoacacia	+	.	+
Rosa sp.	+	+	.	.	.	+
Rubus caesius	+
Rubus hirtus	+	.
Rumex obtusifolius ssp. sylvestris	.	+	+	.	+
Salvia glutinosa	+	+
Scilla bifolia	.	.	+	.	.	+	.	+	+	+	+	+	+	.
Scopolia carniolica	+
Scutellaria altissima	+
Sorbus aucuparia	+
Stachys palustris	+	.
Staphylea pinnata	+	.
Swida sanquinea	+	+	+	.	+	.
Taraxacum officinale	+	+	+
Torilis japonica	+	+
Ulmus minor	2	.	.	3	.	.	.	.	.	.	.	.	+	.	.	.	.	.
Veronica chamaedrys	+	+	.	+
Veronica hederifolia	+
Veronica montana	.	+
Viburnum lantana	+	.	+	.	+	.	.	.	+	.	+	+	+
Viburnum opulus	+	+
Vicia sylvatica	+
Viola mirabilis	+	.	.	+	.	+	.	+	+	+	+	+	+	+	.	+	.	.	+	.
Viola odorata (+V. suavis)	+	.	+	+	+	+	+	+	.	+	.	.	+	+	.	+	+	.	+	+

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
<i>Staphylea pinnata</i>	+	.
<i>Swida sanguinea</i>	+	.	.	.	+	.
<i>Tilia cordata</i>	2	.	+	.	.	.	+	.	+	+	+	.	.	.	.	.	+	.	.	.
<i>Ulmus glabra</i>	+	.	+	+	.	+	+	+	+	+	+	+	+
<i>Ulmus minor</i>	2	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
<i>Viburnum lantana</i>	+	.	+	.	+	.	.	.	+	.	+	+	+
<i>Viburnum opulus</i>	+	+

- 1 – Onyshchenko V.A. (07.06.1995+03.05.1995+28.04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, sq. 35;
- 2 – Onyshchenko V.A. (07.06.1995+06.05.1995), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, sq. 44;
- 3 – Onyshchenko V.A. (08.06.1995+04.1996), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Horodnytske forestry, sq. 36;
- 4 – Onyshchenko V.A. (18.06.1995+26.04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, sq. 38;
- 5 – Onyshchenko V.A. (19.06.1995+27.04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, sq. 8;
- 6 – Onyshchenko V.A. (05.05.1996+04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Horodnytske forestry, sq. 38;
- 7 – Onyshchenko V.A. (02.05.1996), Ternopil Region, Pidvolochysk District, Medobory Nature Reserve, Viknianske forestry, sq. 10;
- 8 – Onyshchenko V.A. (05.05.1996), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Horodnytske forestry, sq. 42;
- 9 – Andrienko T.L. (07.1996) + Onyshchenko V.A. (19.04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Horodnytske forestry, sq. 30;
- 10 – Onyshchenko V.A. (06.1996+23.04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Viknianske forestry, sq. 37;
- 11 – Onyshchenko V.A. (06.1996+04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Krasnianske forestry, sq. 20;
- 12 – Onyshchenko V.A. (09.08.1997+23.04.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Viknianske forestry, sq. 47;
- 13 – Yuglichek L.S. (23.07.2004+04.05.2004), Khmelnytsky Region, Khmelnytsky District, Chervonozirske forestry (Yuglichek & Onyshchenko 2008: rel. 23);
- 14 – Yuglichek L.S. (23.07.2004+04.05.2004), Khmelnytsky Region, Khmelnytsky District, Chervonozirske forestry (Yuglichek & Onyshchenko 2008: rel. 6);
- 15 – Yuglichek L.S. (23.07.2004+04.05.2004), Khmelnytsky Region, Khmelnytsky District, Chervonozirske forestry, sq. 18 (Yuglichek & Onyshchenko 2008: rel. 11);
- 16 – Onyshchenko V.A. (07.05.1996), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Horodnytske forestry, sq. 42;
- 17 – Onyshchenko V.A. (27.04.1997+12.08.1997), Ternopil Region, Pidvolochysk District, Medobory Nature Reserve, Viknianske forestry, sq. 8;
- 18 – Onyshchenko V.A., Lubinska L.G. (25.07.2004+29.04.2004), Khmelnytsky Region, Kamianets-Podilsky District, Panivetske forestry, sq. 31 (Onyshchenko & Lubinska: tab. 1, rel. 3);
- 19 – Onyshchenko V.A., (24.07.2004+30.04.2004), Khmelnytsky Region, Kamianets-Podilsky District, Panivetske forestry;
- 20 – Onyshchenko V.A., (21.08.2004+24.04.2005), Cherkasy Region, Uman District, Sobkivske forestry;
- 21 – Lukash O.V., (21.08.2004+24.04.2005), Cherkasy Region, Uman District, Sobkivske forestry;
- 22 – Onyshchenko V.A., (27.08.2006+26.04.2007), Ivano-Frankivsk Region, Tysmenytsia District, landscape reserve “Kozakova Dolyna”;
- 23 – Lukash O.V., (24.07.2003) + Onyshchenko V.A., Lukash O.V. (01.05.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry, sq. 26 (Onyshchenko & Lukash 2004: tab., rel. 11);
- 24 – Onyshchenko V.A. (23.07.2003+01.05.2003), Vinnytsia Region, Tulchyn District, Zhuravlivske forestry (Onyshchenko & Lukash 2004: tab., rel. 2).

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Ribes spicatum	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Rubus caesius	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Scilla bifolia	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
Scilla siberica	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.
Scutellaria altissima	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
Solanum dulcamara	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Solidago virgaurea	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+
Swida sanguinea	+	.	.	.	.	.	.	+	+	.	.	.	.	.	.	+	.	.	.
Taraxacum officinale	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Torilis japonica	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Tulipa quercetorum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
Ulmus minor	.	.	.	.	.	.	.	.	+	1	+	.	.	.	.	.	.	.	.
Urtica dioica	.	.	.	.	.	+	.	+	+	+	.	.	.	.	.	.	.	+	.
Valeriana stolonifera	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
Veronica chamaedrys	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.
Viburnum lantana	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Viburnum opulus	.	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.
Viola hirta	.	.	.	.	.	.	+	.	.	.	.	.	.	.	+	.	.	.	.
Viola odorata + V. suavis	+	.	.	+	+	+	.	+	+	+	+	1	+	+	+	.	+	.	+
Viola reichenbachiana	.	1	.	.	.	+	.	.	.	.	.	.	.	+	.	.	.	+	.
Distribution of trees and shrubs by height > 5.0 m																			
Acer campestre	.	1	.	.	.	.	.	1	.	.	.	.	.	-	-	-	.	.	.
Acer platanoides	.	.	3	.	.	.	2	.	+	3	1	1	1	-	-	-	2	.	.
Alnus glutinosa	.	.	.	.	.	.	.	.	.	.	.	.	.	-	-	-	.	.	.
Betula pendula	.	.	.	.	1	.	.	.	1	.	1	.	.	-	-	-	.	.	2
Carpinus betulus	4	4	5	5	5	5	2	4	4	4	4	4	4	-	-	-	5	5	5
Cerasus avium	.	.	.	1	.	.	.	1	2	.	.	1	.	-	-	-	.	.	.
Fraxinus excelsior	2	4	.	.	.	.	.	2	.	.	.	.	.	-	-	-	2	.	.
Pinus sylvestris	.	.	.	.	.	1	.	.	.	.	.	.	.	-	-	-	.	.	.
Populus tremula	.	.	.	.	.	.	.	.	.	.	.	.	.	-	-	-	.	.	1
Pyrus communis	.	.	.	.	.	.	.	.	1	.	.	.	.	-	-	-	.	.	.
Quercus petraea	.	1	.	.	.	.	.	.	.	.	.	.	.	-	-	-	.	.	.
Quercus robur	2	.	1	5	4	1	3	4	3	3	3	.	.	-	-	-	2	2	1
Tilia cordata	4	.	.	.	.	.	5	2	3	3	3	4	4	-	-	-	2	.	.
Ulmus glabra	.	.	.	.	+	.	.	1	.	.	.	2	1	-	-	-	.	.	.
Ulmus minor	.	.	.	.	.	.	.	.	.	1	.	.	.	-	-	-	.	.	.
0.5-5.0 m																			
Acer campestre	+	3	+	.	.	.	+	+	+	.	.	.	.	-	-	-	+	3	-
Acer platanoides	1	1	1	1	.	.	2	2	.	2	+	1	+	-	-	-	1	+	-
Acer tataricum	.	.	.	.	.	.	+	.	.	.	.	.	.	-	-	-	.	.	-
Betula pendula	.	.	.	.	.	.	.	.	.	.	+	.	.	-	-	-	.	.	-
Carpinus betulus	1	1	+	1	+	.	+	.	+	.	+	1	+	-	-	-	+	2	-
Cerasus avium	+	.	.	+	.	.	.	.	+	.	.	.	.	-	-	-	.	.	-
Cornus mas	.	.	.	.	.	.	.	.	.	.	.	.	.	-	-	-	.	+	-
Corylus avellana	+	.	.	.	.	1	.	+	1	.	+	.	.	-	-	-	.	.	-
Crataegus curvisepala + C. pseudokyrstostyla	.	+	.	.	.	.	.	.	+	+	.	.	.	-	-	-	.	+	-
Euonymus europaea	.	+	+	+	+	+	+	+	.	.	+	.	.	-	-	-	.	+	-
Euonymus verrucosa	.	.	.	+	.	.	1	+	+	1	+	+	.	-	-	-	.	.	-
Fraxinus excelsior	.	.	.	.	.	.	+	.	.	.	.	.	+	-	-	-	.	.	-
Grossularia uva-crispa	.	.	.	1	.	.	.	.	.	.	+	.	.	-	-	-	.	.	-
Padus avium	.	.	.	.	+	.	.	+	.	.	.	.	.	-	-	-	.	.	-
Padus serotina	.	.	.	.	.	.	.	.	+	.	.	.	.	-	-	-	.	.	-
Pyrus communis	.	.	.	.	.	.	.	.	+	.	.	.	.	-	-	-	.	.	-
Quercus borealis	.	.	.	.	.	.	.	.	+	.	.	.	.	-	-	-	.	.	-
Quercus robur	.	.	.	.	.	.	+	.	.	.	.	.	.	-	-	-	.	.	-
Sambucus nigra	.	.	.	.	.	.	.	+	+	+	.	.	.	-	-	-	.	.	-
Sorbus aucuparia	.	.	+	.	.	.	.	.	.	.	+	.	.	-	-	-	.	.	-
Swida sanguinea	+	.	.	.	.	.	.	+	.	.	.	.	.	-	-	-	.	.	-
Tilia cordata	1	.	+	.	.	.	+	+	+	.	+	.	.	-	-	-	+	+	-
Ulmus glabra	+	+	+	.	.	+	.	+	+	+	.	3	3	-	-	-	+	.	-
Ulmus laevis	.	.	.	.	.	.	.	.	.	.	.	.	.	-	-	-	.	.	-
Ulmus minor	.	.	.	.	.	.	.	.	+	.	.	.	.	-	-	-	.	.	-
Viburnum lantana	.	+	.	.	.	.	.	.	.	.	.	.	.	-	-	-	.	.	-

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
< 0.5 m																			
<i>Acer campestre</i>	1	+	.	.	+	.	+	.	+	.	.	+	+	-	-	-	+	+	-
<i>Acer platanoides</i>	+	.	2	+	+	+	2	+	+	1	+	+	+	-	-	-	1	+	-
<i>Acer pseudoplatanus</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	-	-	-	.	.	-
<i>Acer tataricum</i>	.	.	.	.	.	.	+	.	.	.	.	.	.	-	-	-	.	.	-
<i>Carpinus betulus</i>	+	.	.	+	.	.	.	.	+	.	+	.	.	-	-	-	.	+	-
<i>Cerasus avium</i>	+	.	.	.	.	+	+	+	+	+	+	+	.	-	-	-	.	.	-
<i>Cornus mas</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	-	-	-	.	+	-
<i>Corylus avellana</i>	+	.	.	.	.	.	+	.	+	+	+	.	.	-	-	-	.	.	-
<i>Crataegus curvisepala</i> +	+	.	.	.	.	.	.	.	.	.	.	.	.	-	-	-	.	+	-
<i>C. pseudokyrstostyla</i>																			
<i>Euonymus europaea</i>	+	+	.	+	+	+	.	+	+	+	+	.	+	-	-	-	+	+	-
<i>Euonymus verrucosa</i>	+	.	+	.	.	+	+	+	+	+	+	.	+	-	-	-	+	.	-
<i>Fraxinus excelsior</i>	+	+	.	.	.	.	.	+	.	.	.	+	+	-	-	-	+	+	-
<i>Grossularia uva-crispa</i>	.	.	.	+	.	.	.	.	.	.	.	.	.	-	-	-	.	.	-
<i>Padus avium</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	-	-	-	.	.	-
<i>Quercus borealis</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	-	-	-	.	.	-
<i>Quercus robur</i>	+	.	.	.	.	.	.	.	.	+	+	.	.	-	-	-	.	.	-
<i>Ribes spicatum</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	-	-	-	.	.	-
<i>Rubus caesius</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	-	-	-	.	.	-
<i>Sambucus nigra</i>	.	.	.	.	.	.	.	.	.	+	.	.	.	-	-	-	.	+	-
<i>Sorbus aucuparia</i>	.	.	.	.	+	.	.	.	.	.	+	.	.	-	-	-	.	.	-
<i>Swida sanguinea</i>	.	.	.	.	.	.	.	+	+	.	.	.	.	-	-	-	.	.	-
<i>Tilia cordata</i>	.	.	.	.	.	.	.	.	+	.	+	.	.	-	-	-	+	+	-
<i>Ulmus glabra</i>	+	+	.	+	+	.	.	.	+	+	.	+	+	-	-	-	+	.	-
<i>Ulmus minor</i>	.	.	.	.	.	.	.	.	.	1	+	.	.	-	-	-	.	.	-
<i>Viburnum lantana</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	-	-	-	.	.	-
<i>Viburnum opulus</i>	.	.	.	.	.	+	.	.	+	.	.	.	.	-	-	-	.	.	-

1 – Lukash O.V. (20.08.2004+25.04.2005), Cherkasy Region, Uman District, Sobkivske forestry;

2 – Onyshchenko V.A. (01.05.2006), Vinnytsia Region, Pishchanka District, near Rudnytsia;

3 – Onyshchenko V.A. (22.04.2001+08.2001), Kyiv, Feofania (Onyshchenko 2007: tab. 4, rel. 5);

4 – Onyshchenko V.A. (04.2000+14.06.2000), Kyiv, Holosiyivsky forest (Onyshchenko 2007: tab. 4, rel. 10);

5 – Onyshchenko V.A. (04.2000+14.06.2000), Kyiv, Holosiyivsky forest (Onyshchenko 2007: tab. 4, rel. 4);

6 – Onyshchenko V.A. (04.2000+14.06.2000), Kyiv, Holosiyivsky forest (Onyshchenko 2007: tab. 4, rel. 6);

7 – Onyshchenko V.A. (03.09.2003+05.04.2004), Kyiv, Lysa Hora (Onyshchenko 2007: tab. 4, rel. 7);

8 – Onyshchenko V.A. (03.09.2003+05.04.2004), Kyiv, Lysa Hora (Onyshchenko 2007: tab. 4, rel. 9);

9 – Onyshchenko V.A. (04.2003+09.09.2003), Kyiv, Holosiyivsky forest (Onyshchenko 2007: tab. 4, rel. 1);

10 – Onyshchenko V.A. (04.2004+09.09.2003), Kyiv, Holosiyivsky forest (Onyshchenko 2007: tab. 4, rel. 2);

11 – Onyshchenko V.A. (04.2004+09.09.2003), Kyiv, Holosiyivsky forest (Onyshchenko 2007: tab. 4, rel. 3);

12 – Onyshchenko V.A. (04.05.2005+07.2005), Kyiv Region, Bila Tserkva District;

13 – Onyshchenko V.A. (04.05.2005+07.2005), Kyiv Region, Bila Tserkva District;

14 – Cherkasy Region, Kaniv District, Kanivsky Nature Reserve (Shevchyk et al. 1996: 40-43, tab. 8, rel. 13);

15 – Cherkasy Region, Kaniv District, Kanivsky Nature Reserve (Shevchyk et al. 1996: 40-43, tab. 8, rel. 14);

16 – Cherkasy Region, Kaniv District, Kanivsky Nature Reserve (Shevchyk et al. 1996: 40-43, tab. 8, rel. 15);

17 – Onyshchenko V.A. (06.04.2001+31.08.2001), Kirovohrad Region, Znamianka District, Chorny Lis forest, Bohdanivske forestry, sq. 51 (Onyshchenko & Sidenko 2002: tab. 1, rel. 39);

18 – Onyshchenko V.A. (01.05.2006), Vinnytsia Region, Pishchanka District, near Rudnytsia.

19 – Bakalyina L.V. (15.07.1995), Cherkasy Region, Kaniv District, Kanivsky Nature Reserve (Shevchyk et al. 1996: 76).

Table 54. Subass. Galeobdolon lutei-Carpinetum betuletosum pendulae Shevchyk et al. 1996 (points 1-3 on Fig. 13)

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Exposition	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	S W	-	-	-	-	-
Inclination	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0
Tree layer	95	95	80	60	80	80	70	70	60	60	40	60	70	80	70	80	90	85	90	90	80	90
Shrub layer	25	0	1	15	1	5	1	20	1	60	60	40	10	15	30	20	10	15	0	2	30	8
Herb layer in summer relevé			80	80	70	70	30	80	80	40	70	90	70	70	2	80	50	60	60	80	20	40
Herb layer in spring relevé	55	50	50	50	60	60	25	65	60	45	60	65	45	50	2	50	50	50	70	50	30	
Mosses	0	0					2										0	0	0	0	0	0
Area (sq. m)	100	100	2500	1600	1600	1600	1600	900	2500		900	1600	1600	1200	900	1200	300	900	900	600	600	625
Number of vascular plants species	30	31	22	29	27	28	23	26	25	21	21	20	21	23	25	21	31	30	21	34	35	20
Point number on Fig. 13	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	3	3	3	3	3

D subass. betuletosum pendulae

Carex pilosa	2	2	5	2	1	2	+	2	5	+		4		4		5	1		+	4		4
Convallaria majalis	.	+	.	+	.	.	+	+	+	.	.	.	.	.	.	+	.	.	.	.	2	+
Dryopteris carthusiana	.	.	.	.	+	+	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.
Majanthemum bifolium	+	+	+	+	+	+	+	.	+	+	+	.	+	+	+	+	.	.	+	.	+	.
Melica nutans	.	.	.	.	.	.	.	.	+	.	+	.	+	+	+	.	.	+	.	+	+	+
Sorbus aucuparia	.	.	.	.	.	.	.	.	.	.	+	+	+	.	+	.	.	.	.	.	+	.
Viola mirabilis	1	1	+	+	.	.	.	.	+	.	.	+	.	+	.	.	+	+	.	+	+	+

Ch Carpinion

Carpinus betulus	5	4	2	2	3	3	5	2	2	+	3	+	4	5	3	+	2	4	5	4	4	2
Stellaria holostea	2	2	1	2	3	4	4	2	+	+	3	2	5	1	+	1	2	+	4	2	2	1
Tilia cordata	3	2	.	.	.	.	.	.	+	.	.	.	.	.	.	.	5	4	2	4	4	4

Ch Fagetalia sylvaticae

Actaea spicata	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
Adoxa moschatellina	2	.	+	+	+	1	.	.	.	2	3	+	+	1	+	+	+	1	.	.	.	.
Anemone ranunculoides	1	2	1	2	1	1	2	3	3	.	+	2	2	2	.	2	2	2	3	2	2	1
Asarum europaeum	1	+	1	1	2	1	+	+	1	+	2	2	1	2	+	1	2	1	1	3	2	+
Carex sylvatica	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Corydalis cava	2	1	.	1	2	3	+	.	.	3	.	.	+	.	.	.	+	+	2	1	2	.
Corydalis intermedia	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Corydalis solida	.	.	.	.	.	.	.	.	.	.	4	.	.	.	.	.	.	3	1	2	+	4
Dryopteris filix-mas	+	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.
Ficaria verna	1	2	.	+	.	.	.	.	.	+	+	2	+	.	+	.	+	.	+	.	.	.
Gagea lutea	+	1	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	+	.
Gagea minima	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.
Galium odoratum	2	2	+	2	3	2	.	+	1	.	.	.	+	.	+	+	3	1	.	.	.	.
Impatiens noli-tangere	+	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lamium galeobdolon	.	.	1	1	+	1	+	.	2	2	3	+	1	2	.	.	3	2	2	2	+	+
Lathyrus vernus	+	+	.	+	+	+	.	+	+	.	+	+	.	+	+	.	.	.	.	.	.	4
Mercurialis perennis	+	+	.	.	+	.	.	+	+	.	.	.	.	.	.	.	2	2	.	.	.	.
Milium effusum	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Paris quadrifolia	+	+	.	.	+	+	+	.	.	.	+	.	.	+	+	.	+	.	.	.	.	.
Polygonatum multiflorum	1	+	+	+	+	+	+	.	.	.	+	+	+	+	+	+	+	+	.	+	+	+
Pulmonaria obscura	+	.	+	+	+	+	+	1	+	.	.	+	+	+	+	+	+	+	.	+	+	+
Stachys sylvatica	.	.	+	.	.	+	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.
Ulmus glabra	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	2	.	+	.	.
Viola reichenbachiana	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.

Other species

Acer campestre	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	+	.	.
Acer platanoides	+	+	+	+	+	.	+	+	.	.	+	2	.	+	4	+	2	2	.	3	+	.
Aegopodium podagraria	2	2	3	5	4	3	1	5	2	4	.	5	+	4	.	2	2	1	+	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Distribution of trees and shrubs by height																						
> 5.0 m																						
Acer platanoides	+	.	.	.	2	.	.	4	.	2	2	.	3	.	.
Betula pendula	4	2	.	.	+	.	.	.	+	.	.	2	.	3	.	.	.	.	.	.	.	.
Carpinus betulus	5	4	2	2	3	3	5	2	2	+	.	.	3	4	.	+	2	4	5	4	3	.
Fraxinus excelsior	.	4	.	.	2	2	.	+	.	+	.	.	.	.	.	.	2	5	.	2	.	.
Populus tremula	.	.	2	3	3	3	+	2	3	+	.	.	.	4	.	3	.	.	.	+	.	.
Pyrus communis	+
Quercus borealis	+	.
Quercus robur	.	2	5	4	4	4	+	5	4	5	4	4	5	.	4	5	3	1	5	2	5	5
Tilia cordata	3	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	4	2	4	4	4
Ulmus laevis	+
0.5-5.0 m																						
Acer campestre	+	+
Acer platanoides	+	+	+	+	+	.	.	+	.	.	+	+	.	+	2	+	+	+	.	+	+	.
Betula pendula
Carpinus betulus	.	.	+	2	1	+	1	.	+	.	3	+	2	2	3	+	1	1	.	+	4	2
Corylus avellana	.	.	+	2	+	1	.	3	+	5	4	4	.	+	.	3	+	2	.	+	.	+
Euonymus europaea	+
Euonymus verrucosa	.	+	+	+	+	+	+	+	.	+	+	1
Fraxinus excelsior	.	.	.	+	+	+	+
Padus avium	+	+
Picea abies	+	.
Populus nigra	1	1	.
Populus tremula	+	+
Quercus robur	+	+
Ribes nigrum	+
Rubus idaeus	+	.	.	+
Sambucus racemosa	+
Sorbus aucuparia	+	+	+	.	+	+
Tilia cordata	.	+	+	+	+	.	+	1
Ulmus glabra	+	+	2	2	.	+	.
Ulmus laevis	+
< 0.5 m																						
Acer campestre	+	+	.	+	.
Acer platanoides	+	+	+	+	+
Carpinus betulus	+	+	+	+	.	+	+
Corylus avellana
Euonymus europaea
Euonymus verrucosa	+
Fraxinus excelsior	+	+	+	.	+	+
Padus avium	+	+
Populus nigra	1	.
Populus tremula	+
Quercus robur	+	+	+	.
Rubus caesius
Tilia cordata	+	+	+	+	+
Ulmus glabra	+	+	+	+
Ulmus laevis

1 – Panchenko S.M. (11.05.2003), Chernihiv Region, Korop District, Rykhlivska Dacha (Panchenko & Onyshchenko 2002: tab. 2, rel. 1);

2 – Panchenko S.M. (11.05.2003), Chernihiv Region, Korop District, Rykhlivska Dacha (Panchenko & Onyshchenko 2006: tab. 2, rel. 2);

3 – Lukash O.V. (20.04.2002+30.07.2002), Chernihiv Region, Koriukivka District, Radomska Dacha (Lukash & Onyshchenko 2006: tab. 2, rel. 3);

4 – Lukash O.V. (20.04.2002+30.07.2002), Chernihiv Region, Koriukivka District, Radomska Dacha (Lukash & Onyshchenko 2006: tab. 2, rel. 8);

5 – Lukash O.V. (21.04.2002+31.07.2002), Chernihiv Region, Koriukivka District, Radomska Dacha (Lukash & Onyshchenko 2006: tab. 2, rel. 15);

6 – Lukash O.V. (21.04.2002+31.07.2002), Chernihiv Region, Koriukivka District, Radomska Dacha (Lukash & Onyshchenko 2006: tab. 2, rel. 16);

7 – Lukash O.V. (21.04.2002+31.07.2002), Chernihiv Region, Koriukivka District, Radomska Dacha (Lukash & Onyshchenko 2006: tab. 2, rel. 7);

8 – Lukash O.V. (21.04.2002+31.07.2002), Chernihiv Region, Koriukivka District, Radomska Dacha (Lukash & Onyshchenko 2006: tab. 2, rel. 2);

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
<i>Corydalis solida</i>	.	.	+	.	.	+	1	2	+	3	+	.	2	.	4	3	3	4	2	1	4	3	3	2	1	3	3	-	
<i>Ficaria verna</i>	+	+	1	2	4	3	5	+	3	+	.	4	+	2	2	+	3	+	2	2	+	.	+	.	.	.	.	.
<i>Gagea lutea</i>	.	.	+	+	.	+	+	.	+	+	+	.	+	+	+	.	+	+	+	+	.	.	+	.	+	+	+	-	
<i>Gagea minima</i>	.	.	.	.	.	.	.	.	+	.	.	.	+	+	1	+	.	.	+	+	1	.	.	.	.	.	.	-
<i>Stachys sylvatica</i>	.	.	.	.	.	.	.	.	.	+	.	.	+	+	+	.	.	.	.	.	.	.	.	.	+	+	.	.
<i>Acer pseudoplatanus</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Adoxa moschatellina</i>	+	2	+	+	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Asarum europaeum</i>	+	1	+	2	2	1	+	1	1	+	1	+	.	1	+	.	.	1	+	+	.	+	+	.	+	.	.	+	
<i>Dentaria bulbifera</i>	.	.	.	.	+	.	+	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	-
<i>Dryopteris filix-mas</i>	.	.	.	.	.	1	+	.	+	.	+	.	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Galium odoratum</i>	.	.	.	.	.	+	+	+	.	2	.	.	1	1	.	.	.	1	.	.	.	1	.	.	+	.	.	.
<i>Lamium galeobdolon</i>	+	3	.	2	2	2	1	+	3	+	1	2	1	2	+	.	.	+	+	+	.	+	3	.	.	.	.	1
<i>Lathyrus vernus</i>	.	.	.	.	.	+	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Mercurialis perennis</i>	+	.	.	.	.	.	.	.	.	.	1	.	+	+	+	.	+	.	.	.	.	.	.	.	.	+	.	.
<i>Milium effusum</i>	.	.	.	.	.	.	.	.	.	.	+	.	+	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.
<i>Paris quadrifolia</i>	+	+	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Polygonatum multiflorum</i>	+	+	+	+	.	.	.	.	+	+	+	.	+	+	+	.	.	.	+	+	+	.	.	.	+	.	.	+
<i>Pulmonaria obscura</i>	+	+	+	+	+	+	+	1	+	+	+	.	+	+	+	.	+	+	.	+	+	+	+	+	.	1	+	+	
<i>Sanicula europaea</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Scrophularia nodosa</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Ulmus glabra</i>	.	.	1	2	3	+	1	+	1	.	+	3	.	.	+	+	2	1	+	+	+	.	+	.	.	1	+	.	
<i>Viola reichenbachiana</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+	.	.	+	+
Other species																													
<i>Acer campestre</i>	.	.	.	+	+	.	+	1	3	1	+	1	2	+	3	4	1	+	2	+	3	4	+	.	5	5	4	1	
<i>Acer negundo</i>	.	.	.	1	.	.	.	+
<i>Acer platanoides</i>	.	+	4	3	4	4	5	5	+	1	1	+	2	+	1	3	5	1	2	1	2	+	+	2	.	+	.	3	
<i>Acer tataricum</i>	1	+	+
<i>Aegopodium podagraria</i>	5	2	.	1	.	.	+	+	2	.	5	+	3	3	5	.	4	+	.	.	.	.	+	.	.	.	.	.
<i>Aesculus hippocastanum</i>	2
<i>Ajuga reptans</i>	.	+
<i>Alliaria petiolata</i>	.	.	+	+	.	+	.	+	.	+	.	.	.	.	+	1	+	+	1	.	1	1	1	1	+	.	.	.
<i>Allium ursinum</i>	.	.	.	.	.	.	.	.	.	.	.	.	2	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Athyrium filix-femina</i>	.	.	.	.	.	1	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Ballota nigra</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	.	+	+	.	.	.	.	.	.
<i>Betula pendula</i>	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
<i>Brachypodium sylvaticum</i>	+	+
<i>Campanula rapunculoides</i>	+	.	.	+
<i>Campanula trachelium</i>	.	.	+	+	+
<i>Carex muricata</i>	+	.	.	.	+
<i>Chaerophyllum aromaticum</i>	+	+
<i>Chaerophyllum temulum</i>	.	.	.	.	.	.	.	.	+	+	+	.	+	+	+	.	+	.	.	.	.	+	+	.	+	+	+	.
<i>Chelidonium majus</i>	+	+	.	+	.	+	.	+	.	.	+
<i>Chrysosplenium alternifolium</i>	+
<i>Circaea lutetiana</i>	+
<i>Conyza canadensis</i>	+
<i>Cornus mas</i>	+	1	.
<i>Corydalis marschalliana</i>	+	+
<i>Corylus avellana</i>	4	4	.	1	+	.	.	.	+	+	+	.	+	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
<i>Crataegus curvisepala</i>	+	+	+	.	+	+	.	+	+	.
<i>Cucubalus baccifer</i>	+
<i>Cystopteris fragilis</i>	+
<i>Dactylis glomerata</i>	.	+
<i>Dentaria quinquefolia</i>	1
<i>Epipactis helleborine</i>	+	+	.	.
<i>Equisetum arvense</i>	+	+
<i>Equisetum sylvaticum</i>	.	3
<i>Euonymus europaea</i>	.	.	.	+	+	.	.	+	+	+	+	+	.	.	+	+	.	1	1	+	1	1	+	+	+	+	1	.	
<i>Euonymus verrucosa</i>	+	.	.	.	.	+	+	+	.	+	.	.	.	.	.	.	+	+	1	1	+	1	+	1	.	.	+	.
<i>Fallopia dumetorum</i>	+	+
<i>Fraxinus excelsior</i>	2	.	.	.	.	.	.	1	.	+	.	.	.	.	5	4	4	4	4	4	+	4	1	3	.	2	+	+
<i>Galanthus nivalis</i>	+	.	.	-
<i>Galeopsis bifida</i>	+
<i>Galium aparine</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	+	.	+	+	+	+	+	+	2	1	.	+	+	+
<i>Geranium robertianum</i>	.	.	+	.	.	+	.	.	.	.	.	.	+	+	.	.	.	.	.	+	.	+	.	.	+	.	.	+
<i>Geum urbanum</i>	.	.	+	+	.	.	.	+	+	+	+	.	.	.	+	+	+	+	+	+	+	.	+	+	+	.	+	+	
<i>Glechoma hirsuta</i>	.	+	.	.	.	.	.	.	.	.	+	.	.	+	+	1	+	1	+	+	.	+	.	+	.	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
Gleditsia triacanthos	+	+
Grossularia uva-crispa	+	+
Hylotelephium polonicum	+
Impatiens parviflora	.	.	.	+	+	1	+	3	2	1	1	+	.	.	+	.	+	.	.	.	1	.	.	.	.	.	.	4	
Lactuca serriola	+
Lapsana communis	+	+	.	.	+	.	.	+	.	.
Lathraea squamaria	+	.	.	.	+	-
Lathyrus niger	+	.
Lilium martagon	+	.	.	.
Lysimachia nummularia	+
Moehringia trinervia	.	.	+	+	.	.	+	+	+
Mycelis muralis	+	.	.	.	+	+
Picea abies	+
Poa nemoralis	+	+	.	.	+
Polygonatum hirtum	2	1	+	+	1	+	2	+	+	.	1	2	+	.
Populus tremula	5	.	.	.	.	.	.	.	1	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pyrus communis	+
Quercus borealis	+	+	.	.	.
Quercus robur	2	5	5	5	3	4	3	.	3	4	2	3	.	.	.	+	.	3	3	4	+	4	4	.	2	2	4	.	
Ranunculus cassubicus	+	+	+
Ranunculus repens	.	+
Robinia pseudoacacia	1	.	.	+	2	.	.	.	.
Rosa sp.	+
Rubus caesius	.	+	+
Rubus idaeus	.	+
Scilla bifolia	+	.	.	.	1	+	.	.	.	.	+	.	+	.	1	.	.	.	.	-
Scutellaria altissima	+	.	.	.	+	.	+
Swida sanguinea	+	+	.	+	.	.	+	+	.	+
Taraxacum officinale	+
Tilia cordata	.	.	2	+	.	+	.	2	3	+	5	1	.	.	+	2	+	1	1	1	1	+	2	5	.	.	+	.	
Torilis japonica	+	+	.	.	.	+
Ulmus laevis	+
Ulmus minor	1	2	+	.	.	.	.	+	+	.	.	.	.	1	+	2	.	.	.	.	.	.
Ulmus suberosa	1	.	.
Viburnum lantana	+	+	.	.	+	+	+	+	+	.	+	+	+	.
Viola hirta	+	+
Viola odorata	.	.	+	+	.	+	+	+	+	+	.	+	.	.	+	1	.	.	+	1	+	1	+	+	.	.	+	+	+
Distribution of trees and shrubs by height																													
> 5.0 m																													
Acer campestre	3	.	.	.	-	-	2	.	.	.	1	.	+	.	+	.	3	5	4	.	
Acer negundo	.	.	1	.	.	.	.	.	.	.	.	-	-	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Acer platanoides	.	.	4	3	4	4	5	5	.	.	.	-	-	+	1	4	.	2	1	+	.	+	2	.	.	.	.	2	
Acer tataricum	1	.	.	-	-	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Aesculus hippocastanum	-	-	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Betula pendula	2	.	.	.	.	.	.	.	.	.	.	-	-	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
Carpinus betulus	.	+	2	3	4	4	1	1	3	4	1	5	-	-	1	3	1	4	.	5	5	2	5	3	3	.	3	5	
Cerasus avium	+	-	-	+	.	.	.	1	.	.
Fraxinus excelsior	2	.	.	.	.	.	.	1	.	.	.	.	-	-	5	4	4	4	4	.	4	.	3	.	2	.	.	.	
Padus avium	-	-	+
Populus tremula	5	.	.	.	.	.	.	.	1	2	.	-	-	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Quercus borealis	+	.	.	.	-	-
Quercus robur	2	5	5	5	3	4	3	.	3	4	2	3	-	-	.	.	.	3	3	4	+	4	4	.	2	2	4	.	
Robinia pseudoacacia	-	-	1	.	.	.	2	.	.	.	.
Tilia cordata	.	.	1	.	.	.	.	2	3	.	5	1	-	-	.	2	.	1	1	1	1	.	2	5	.	.	.	.
Ulmus glabra	.	.	1	.	.	.	+	.	.	.	.	-	-	.	.	+	.	.	.	.	.	.	.	.	.	.	+	.	.
Ulmus minor	1	2	+	.	-	-	.	.	.	.	.	.	.	1	.	2	.	.	.	.	.	.
0.5-5.0 m																													
Acer campestre	+	1	2	+	+	1	-	-	2	4	1	+	1	+	2	4	.	.	4	1	1	-	
Acer negundo	+	.	.	.	-	-	-
Acer platanoides	.	+	2	+	+	.	.	1	+	1	1	+	-	-	.	1	2	1	.	+	2	+	.	.	.	+	.	-	
Acer pseudoplatanus	+	.	.	.	-	-	-
Acer tataricum	+	.	.	-	-	+	-
Carpinus betulus	+	.	2	1	.	.	.	+	.	1	1	+	-	-	+	+	.	2	+	1	.	2	1	.	2	+	1	-	
Cerasus avium	-	-	+	.	.	+	.	.	.	+	+	-
Cornus mas	-	-	+	1	-
Corylus avellana	4	4	.	1	+	.	.	.	+	+	+	.	-	-	.	.	.	.	.	.	.	.	.	.	.	.	.	.	-
Crataegus curvisepala	-	-	+	.	.	+	.	.	.	+	+	-

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
<i>Crataegus sp.</i>	+	
<i>Euonymus europaea</i>	+	+	+	+	+	+	.	1	.	.	.	+	.	.	.	+	.	
<i>Euonymus verrucosa</i>	+	+	+	+	1	1	+	+	+	+	.	.	.	.	.
<i>Fraxinus excelsior</i>	+	.	+	+	+	+	.	+	.	+	+	.	.	.	+	+	.	
<i>Padus avium</i>	+	+	+	.	.	.	
<i>Picea abies</i>	+	
<i>Populus tremula</i>	+	
<i>Pyrus communis</i>	+	
<i>Quercus borealis</i>	+	.	.	
<i>Robinia pseudoacacia</i>	+	.	.	+	+	.	.	.	
<i>Rosa sp.</i>	+	
<i>Rubus caesius</i>	.	+	
<i>Rubus idaeus</i>	.	+	
<i>Sambucus nigra</i>	.	.	2	1	+	.	+	2	+	+	+	.	.	.	1	.	1	.	+	.	.	.	1	+	2	.	+	.	
<i>Swida sanguinea</i>	+	.	.	.	+	
<i>Tilia cordata</i>	.	.	2	.	.	+	.	+	+	+	+	+	.	.	+	.	+	+	.	+	.	+	+	.	.	.	.
<i>Ulmus glabra</i>	.	.	1	2	3	+	1	+	1	.	+	3	.	.	+	+	2	1	+	+	.	.	+	.	.	1	+		
<i>Ulmus minor</i>	+	+	+	+	+		
<i>Ulmus suberosa</i>	1	.		
<i>Viburnum lantana</i>	+	+	.	
< 0.5 m																													
<i>Acer campestre</i>	.	.	.	+	+	.	.	+	+	1	.	.	.	.	.	1	1	+	+	+	+	2	+	+	.	+	+	.
<i>Acer negundo</i>	
<i>Acer platanoides</i>	.	.	+	+	+	1	+	+	+	+	+	.	.	.	1	2	+	+	+	.	+	+	+	.	.	.	.
<i>Acer tataricum</i>	+	
<i>Betula pendula</i>	
<i>Carpinus betulus</i>	+	.	+	+	.	1	.	.	+	+	.	+	+	+	+	.	
<i>Cerasus avium</i>	+	+	+	1	+	.	.	+	.	
<i>Cornus mas</i>	+	+	
<i>Corylus avellana</i>	+	+	+	
<i>Crataegus curvisepala</i>	+	+	+	.	+	+	.	+	+	.	
<i>Euonymus europaea</i>	.	.	.	+	+	.	.	+	+	+	+	+	.	.	+	+	.	1	+	+	1	1	+	+	+	+	1	.	
<i>Euonymus verrucosa</i>	+	+	+	.	+	+	+	+	1	+	1	.	.	+	
<i>Fraxinus excelsior</i>	+	.	+	+	1	.	+	+	+	+	1	+	.	+	+	+	
<i>Gleditsia triacanthos</i>	
<i>Grossularia uva-crispa</i>	
<i>Padus avium</i>	
<i>Populus tremula</i>	+	
<i>Quercus borealis</i>	
<i>Quercus robur</i>	+	.	.	.	+	+	.	+	.	.	.	+	.	+	+	.	+	
<i>Robinia pseudoacacia</i>	+	.	.	.	
<i>Rubus caesius</i>	+	
<i>Sambucus nigra</i>	.	.	+	+	+	+	+	+	+	+	.	+	+	+	.	.	
<i>Swida sanguinea</i>	
<i>Ulmus glabra</i>	.	.	.	+	+	.	+	.	.	+	+	+	+	+	.	+	.	.	+	.	
<i>Ulmus laevis</i>	
<i>Ulmus minor</i>	+	
<i>Viburnum lantana</i>	+	.

1 – Lukash O.V. (21.04.2002+31.07.2002), Chernihiv Region, Koriukivka District, Radomska Dacha (Lukash & Onyshchenko 2006: tab. 2, rel. 24);

2 – Lukash O.V. (20.04.2002+30.07.2002), Chernihiv Region, Koriukivka District, Radomska Dacha (Lukash & Onyshchenko 2006: tab. 2, rel. 26);

3 – Onyshchenko V.A. (04.2001+05.2004), Kyiv, Feofania (Onyshchenko 2007: tab. 4, rel. 23);

4 – Onyshchenko V.A. (04.2000+08.2001), Kyiv, Feofania (Onyshchenko 2007: tab. 4, rel. 24);

5 – Onyshchenko V.A. (04.2001+08.2001), Kyiv, Feofania (Onyshchenko 2007: tab. 4, rel. 25);

6 – Onyshchenko V.A. (04.2001+08.2001), Kyiv, Feofania (Onyshchenko 2007: tab. 4, rel. 17);

7 – Onyshchenko V.A. (11.05.2003+30.05.2003), Kyiv, M.Rylsky Holosiyivsky park (Onyshchenko 2007: tab. 4, rel. 14);

8 – Onyshchenko V.A. (11.08.2003+05.04.2004), Kyiv, Tserkovshchyna (Onyshchenko 2007: tab. 4, rel. 22);

9 – Onyshchenko V.A. (14.08.2003+05.04.2004), Kyiv, Seriakove (Onyshchenko 2007: tab. 4, rel. 21);

10 – Onyshchenko V.A. (03.09.2003+05.04.2004), Kyiv, Lysa Hora (Onyshchenko 2007: tab. 4, rel. 15);

11 – Onyshchenko V.A. (03.09.2003+05.04.2004), Kyiv, Lysa Hora (Onyshchenko 2007: tab. 4, rel. 16);

12 – Onyshchenko V.A. (03.09.2003+05.04.2004), Kyiv, Feofania (Onyshchenko 2007: tab. 4, rel. 27);

13 – Kanivsky Nature Reserve (Shevchyk et al. 1996: 40-43, tab. 8, rel. 10);

14 – Kanivsky Nature Reserve (Shevchyk et al. 1996: 40-43, tab. 8, rel. 11);

15 – Lukash O.V. (20.08.2004+25.04.2005), Cherkasy Region, Uman District, dendropark “Sofiyivka”;

16 – Onyshchenko V.A. (20.08.2004+25.04.2005), Cherkasy Region, Uman District, dendropark “Sofiyivka”;

17 – Onyshchenko V.A. (20.08.2004+25.04.2005), Cherkasy Region, Uman District, dendropark “Sofiyivka”;

- 18 – Onyshchenko V.A. (21.08.2004+24.04.2005), Cherkasy Region, Uman District, Sobkivske forestry;
- 19 – Onyshchenko V.A. (21.08.2004+24.04.2005), Cherkasy Region, Uman District, Sobkivske forestry;
- 20 – Onyshchenko V.A. (21.08.2004+24.04.2005), Cherkasy Region, Uman District, Sobkivske forestry;
- 21 – Lukash O.V. (20.08.2004+25.04.2005), Cherkasy Region, Uman, dendropark “Sofiyivka”;
- 22 – Lukash O.V. (21.08.2004+24.04.2005), Cherkasy Region, Uman District, Sobkivske forestry;
- 23 – Lukash O.V. (21.08.2004+24.04.2005), Cherkasy Region, Uman District, Sobkivske forestry;
- 24 – Lukash O.V. (02.05.2004+12.08.2004), Chernihiv Region, Ichnia District;
- 25 – Onyshchenko V.A. (01.05.2006), Vinnytsia Region, Pishchanka District, near Rudnytsia;
- 26 – Onyshchenko V.A. (01.05.2006), Vinnytsia Region, Pishchanka District, near Rudnytsia;
- 27 – Onyshchenko V.A. (01.05.2006), Vinnytsia Region, Pishchanka District, near Rudnytsia.
- 28 – Bakalyna L.V. (15.07.1995), Kanivsky Nature Reserve, sq. 15 (Shevchyk et al. 1996: 76).

Table 56. Subass. Galeobdolon lutei-Carpinetum melampyretosum nemorosi Vorobyov et al. 2008

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Exposition																S				
Inclination																20				15
Tree layer	70	90	90	60	70	80	60	60	60	90	60	60	60	60	70	80	80	90	100	
Shrub layer	10	10	10	0	0	0	20	0	10	0	0	20	0	0	0	10				“0.1”
Herb layer in summer relevé	30	70	60	50	70	50	60	50	50	30	50	30	30	40	20	30	40	25	25	30
Herb layer in spring relevé																55				
Number of species of vascular plants	45	45	45	28	40	35	47	35	49	24	33	38	28	28	38	40	56	56	52	53
Nomenclatural type																				*

D subass. melampyretosum nemorosi

Astragalus glycyphyllos	+	+	.	.	+	+	.	.	+	.	.	.	.	.	.	.	.	+	.	.
Campanula persicifolia	+	+	+	.	.	.	+	+	+	+	.	+	.	.	+	.	.	+	+	+
Carex michelii	+	1	+	+	+	+	.	+	+	.	.	+	+	.	.	.	.	.	.	.
Dactylis glomerata	+	+	+	+	+	+	+	+	+	.	.	.	.	.	+	.	+	+	+	+
Lathyrus niger	+	+	+	+	+	.	.	.	.	+	.	+	.	+	.	.	+	+	+	+
Hylotelephium polonicum	+	+	.	.	.	.	.	.	+	+	.	.	.	.	.	.	+	+	+	+
Melampyrum nemorosum + M. polonicum	+	+	+	.	+	.	.	.	.	.	+	.	.	.	.	.	+	+	+	+
Poa nemoralis	+	3	3	+	+	3	1	2	2	2	2	+	+	+	+	+	3	2	2	1
Polygonatum odoratum	+	.	.	.	.	.	.	.	.	.	.	+	+	.	+	.	.	+	.	+
Scutellaria altissima	+	.	.	+	+	+	+	.	.	.	.	.	.	.	.	+	.	+	+	+
Solidago virgaurea	+	.	+	.	+	.	+	.	.	.	.	.	+	.	.	.	+	.	+	+
Viscaria vulgaris	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+
Veronica chamaedrys	.	+	.	.	.	+	.	.	+	+	.	.	.	.	.	.	+	+	.	+
Viola hirta	+	+	+	+	.	+	.	.	+	+	.	.	+	+	+	.	.	.	+	+

Ch Carpinion

Carpinus betulus	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	2	+	5	5	5
Cerasus avium	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.
Stellaria holostea	+	2	1	3	1	1	1	2	1	.	3	4	3	3	+	2	+	1	1	+	

Ch Fagetalia sylvaticae

Actaea spicata	.	.	.	.	.	.	+	.	.	.	.	.	.	.	+	.	.	.	.	.
Allium ursinum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.	-	-	-	+
Anemone ranunculoides	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	.	+	+	+
Asarum europaeum	+	.	+	.	1	.	+	+	1	+	1	1	.	+	.	.	.	+	+	.
Carex pilosa	.	+	.	.	4	.	1	+	1	+	+	1	+	.	+	4	2	+	+	2
Carex sylvatica	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
Corydalis cava	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	.	+	.	.
Corydalis intermedia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.	.	+	+	+
Corydalis solida	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	+	1	+	+
Dentaria bulbifera	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	+	1	.	+
Dentaria quinquefolia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.	.	.	.	+
Dryopteris filix-mas	.	+	+	.	+	.	.	.	+	.	.	+	.	.	+	.	.	+	+	+
Epilobium montanum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
Ficaria verna	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.	.	.	.	+
Gagea lutea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	.	.	.	+
Gagea minima	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.	.	+	+	.
Galium odoratum	.	.	.	.	.	.	+	+	.	.	+	1	2	+	+	.	+	+	.	+
Lathyrus vernus	+	.	.	.	+	.	+	.	.	+	+	+	.	.	+	+	+	+	+	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<i>Humulus lupulus</i>	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Hypericum hirsutum</i>	.	.	.	.	+	+	.	.	.	.	.	.	.	.	+	.	.	.	.	.
<i>Hypericum perforatum</i>	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	+	+	.	.
<i>Impatiens parviflora</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Inula salicina</i>	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Lamium maculatum</i>	.	.	.	+	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Lamium purpureum</i>	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Lapsana communis</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
<i>Ligustrum vulgare</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
<i>Lithospermum officinale</i>	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Majanthemum bifolium</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Malus sylvestris</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Melica nutans</i>	.	+	+	.	.	.	+	.	+	.	.	+	+	.	+	+	+	.	+	+
<i>Moehringia trinervia</i>	.	.	.	+	.	+	.	.	+	.	.	+	.	.	.	.	+	.	+	.
<i>Mycelis muralis</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	+	+	+	+
<i>Neottia nidus-avis</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	+
<i>Origanum vulgare</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
<i>Peucedanum cervaria</i>	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Peucedanum oreoselinum</i>	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Phalacrolooma annuum</i>	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Pinus sylvestris</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
<i>Platanthera bifolia</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
<i>Polypodium vulgare</i>	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	.
<i>Populus alba</i>	+	.	.	+	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.
<i>Populus tremula</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.
<i>Prunus domestica</i>	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Pteridium aquilinum</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Pulmonaria mollis</i>	+	.	+	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	.
<i>Pyrethrum corymbosum</i>	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Pyrus communis</i>	+	+	+	+	.	+	+	.	.	.	+	+	+	+	.	+	+	+	+	.
<i>Quercus robur</i>	1	3	4	+	1	3	+	.	.	4	.	.	+	+	+	3	4	+	+	.
<i>Rhamnus cathartica</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Rosa canina</i>	.	.	.	.	.	.	.	.	+	+	+	.	.	.	+	.	+	.	.	.
<i>Rosa corymbifera</i>	+	+	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.	+	.
<i>Rubus caesius</i>	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Rubus saxatilis</i>	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Scilla bifolia</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	.	+	+	+
<i>Scilla siberica</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	.	.	.	.
<i>Securigera elegans</i>	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Securigera varia</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.
<i>Silene nutans</i>	+	+	+	.	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Sorbus aucuparia</i>	+	.	.	.	.	+	.	.	.	+	.	+	.	.	+	.	.	.	.	.
<i>Swida sanguinea</i>	.	.	.	.	+	.	+	.	.	.	.	+	.	.	+	.	.	+	.	.
<i>Taraxacum officinale</i>	.	+	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Thalictrum minus</i>	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Tilia cordata</i>	1	.	1	1	1	2	1	+	+	1	.	+	.	.	+	1	.	.	+	.
<i>Torilis japonica</i>	.	.	+	.	+	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.
<i>Tulipa quercetorum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
<i>Ulmus minor</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.
<i>Urtica dioica</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
<i>Viburnum lantana</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
<i>Viburnum opulus</i>	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Vicia sepium</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Vicia sylvatica</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.
<i>Vincetoxicum hirundinaria</i>	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
<i>Viola mirabilis</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
<i>Viola odorata</i>	+	+	+	+	+	+	+	1	+	.	+	+	1	+	+	+	+	+	+	+

1-15 – Lyubchenko V.M. (Lyubchenko et al. 1997: 30-33, tab. 1, rel. 1-15);

16 – Onyshchenko V.A. (31.08.2001+06.04.2001), Kirovohrad Region, Znamiyanka District, Chorny Lis (point 17 on Fig. 13) (Onyshchenko & Sidenko 2002: tab. 1, rel. 41);

17 – Cherkasy Region, Kanivsky Nature Reserve (Shevchyk et al. 1996b: 40-43, tab. 8, rel. 19);

18 – Cherkasy Region, Kanivsky Nature Reserve (Shevchyk et al. 1996b: 40-43, tab. 8, rel. 20);

19 – Cherkasy Region, Kanivsky Nature Reserve (Shevchyk et al. 1996b: 40-43, tab. 8, rel. 21);

20 – Bakalyna L.V. (20.05.1990), Cherkasy Region, Kanivsky Nature Reserve (Vorobyov et al. 2008: 2002: 162-163).

Table 57. Com. *Acer platanoides*-*Tilia cordata* Jutrzenka-Trzebiatowski 1993

Number in table	1	2	3	4	5	6	7	8
Exposition	NW	NW	NW	NW	N	S	S	SE
Inclination	45	40	40	40	30	45	40	50
Tree layer	90	80	80	80	60	80	80	90
Shrub layer	20	10	10	10	90	10	10	10
Herb layer	15	20	40	30	40	60	60	40
Number of vascular plants species	19	23	27	25	22	31	23	24
Point number on Fig. 14	2	2	2	2	1	2	2	2

D *Acer platanoides*-*Tilia cordata*

<i>Acer tataricum</i>	1	1	1	.	.	2	2	.
<i>Campanula rapunculoides</i>	.	.	1	+	.	1	+	.
<i>Cystopteris fragilis</i>	.	.	.	.	.	1	1	+
<i>Hylotelephium polonicum</i>	.	.	.	1	1	1	1	.
<i>Lamium maculatum</i>	+	1	.	.	.	1	1	1
<i>Poa nemoralis</i>	2	2	2	1	4	4	4	1
<i>Tilia cordata</i>	5	5	5	5	5	5	5	5

Ch *Fagetalia sylvaticae*

<i>Asarum europaeum</i>	1	2	1	.	.	1	.	2
<i>Carex pilosa</i>	.	.	.	.	.	1	.	.
<i>Dryopteris filix-mas</i>	2	2	1	1	.	.	2	2
<i>Lamium galeobdolon</i>	.	.	.	1	.	.	.	.
<i>Lathyrus vernus</i>	1	1	1	1	.	.	.	+
<i>Pulmonaria obscura</i>	.	1	.	.	.	1	.	1

Ch *Quercetalia pubescentis*,

Geranio-Trifolietea

<i>Campanula persicifolia</i>	.	.	+	1	.	.	.	.
<i>Clematis recta</i>	.	.	1	.	.	+	1	.
<i>Cruciata glabra</i>	.	.	1	.	.	.	.	.
<i>Geranium sanguineum</i>	.	.	.	.	.	+	.	.
<i>Lathyrus niger</i>	.	2	+	.	.	1	.	.
<i>Pyrethrum corymbosum</i>	.	.	.	1	.	.	.	.
<i>Veronica chamaedrys</i>	.	.	.	.	1	+	1	1
<i>Viola hirta</i>	.	.	.	.	.	+	.	.

Other species

<i>Acer negundo</i>	.	.	.	.	.	.	.	1
<i>Acer platanoides</i>	3	4	3	3	2	1	.	1
<i>Achillea millefolium</i>	.	.	.	.	.	+	.	.
<i>Aegopodium podagraria</i>	1	1	.	.	.	.	1	2
<i>Ajuga reptans</i>	.	.	1	.	.	.	.	.
<i>Alliaria petiolata</i>	.	.	.	.	.	.	.	1
<i>Alnus glutinosa</i>	.	.	.	.	.	.	.	1
<i>Anthriscus sylvestris</i>	.	.	.	.	1	+	.	.
<i>Aristolochia clematitis</i>	.	.	.	.	.	+	.	.
<i>Betula pendula</i>	.	.	.	1	.	.	.	.
<i>Calamagrostis arundinacea</i>	.	.	.	1	.	.	.	.
<i>Carex digitata</i>	.	1	2	1	.	1	1	.
<i>Carpinus betulus</i>	.	.	.	.	1	.	.	.
<i>Convallaria majalis</i>	1	1	1	1	.	.	.	.
<i>Corylus avellana</i>	1	1	1	2	4	1	1	1
<i>Dactylis glomerata</i>	.	.	.	.	1	.	+	.
<i>Dryopteris carthusiana</i>	.	.	1	.	1	.	.	.
<i>Equisetum sylvaticum</i>	.	.	.	.	.	.	.	2
<i>Euonymus europaea</i>	.	.	.	.	1	1	.	1
<i>Euonymus verrucosa</i>	2	3	1	1	2	1	1	1
<i>Fallopia convolvulus</i>	.	.	.	.	+	+	+	.
<i>Festuca gigantea</i>	.	.	.	.	.	.	.	1
<i>Fraxinus excelsior</i>	.	.	.	.	2	.	.	.
<i>Galium aparine</i>	.	.	.	.	+	.	.	.
<i>Impatiens parviflora</i>	+	.	.	.	.	1	+	2
<i>Lilium martagon</i>	.	+	.	.	.	.	.	.
<i>Luzula pilosa</i>	.	.	1	1	.	.	.	.
<i>Majanthemum bifolium</i>	.	.	.	1	.	.	.	+

Number in table	1	2	3	4	5	6	7	8
Melampyrum nemorosum	.	.	.	.	.	1	2	.
Melica nutans	+	1	2	2	1	1	.	1
Padus avium	1	.	.	.	1	.	.	.
Phalacrolooma annuum	.	.	.	.	.	.	1	1
Polygonatum odoratum	1	.	1	.	.	.	.	.
Polypodium vulgare	.	+	2	2	.	.	.	.
Quercus robur	.	1	+	+	1	3	2	.
Rubus idaeus	.	.	.	.	+	.	.	.
Solidago virgaurea	.	.	1	1	.	.	.	.
Sorbus aucuparia	.	1	1	1	.	.	1	.
Stellaria holostea	1	1	1	1	2	1	.	1
Taraxacum officinale	.	.	.	.	+	+	.	.
Ulmus glabra	1	1	1	.	.	1	.	.
Vaccinium myrtillus	.	.	.	1	.	.	.	.
Veronica officinalis	.	.	.	.	.	.	+	.
Viola mirabilis	1	1	.	.	.	.	.	.
Viscaria vulgaris	.	.	.	.	+	.	1	.
Distribution of trees and shrubs by layers								
Acer platanoides (a)	3	2	2	2	.	.	.	.
Alnus glutinosa (a)	.	.	.	.	.	.	.	1
Betula pendula (a)	.	.	.	1	.	.	.	.
Carpinus betulus (a)	.	.	.	.	1	.	.	.
Quercus robur (a)	.	.	.	.	.	3	2	.
Tilia cordata (a)	5	5	5	5	5	5	5	5
Acer negundo (b)	.	.	.	.	.	.	.	1
Acer platanoides (b)	1	3	1	1	2	1	.	1
Acer tataricum (b)	1	1	1	.	.	2	2	.
Corylus avellana (b)	1	1	1	2	4	1	1	1
Euonymus verrucosa (b)	2	2	.	.	1	.	.	.
Fraxinus excelsior (b)	.	.	.	.	2	.	.	.
Padus avium (b)	1	.	.	.	1	.	.	.
Quercus robur (b)	.	.	+	.	1	.	.	.
Rubus idaeus (b)	.	.	.	.	+	.	.	.
Sorbus aucuparia (b)	.	1	1	1	.	.	1	.
Tilia cordata (b)	2	1	1	.	.	1	1	1
Acer platanoides (c)	1	1	1	1	.	.	.	.
Carpinus betulus (c)	.	.	.	.	1	.	.	.
Corylus avellana (c)	.	.	+	+	.	.	.	.
Euonymus europaea (c)	.	.	.	.	1	1	.	1
Euonymus verrucosa (c)	1	2	1	1	1	1	1	1
Quercus robur (c)	.	1	.	+	.	1	.	.
Tilia cordata (c)	.	+	.	.	.	.	.	.
Ulmus glabra (c)	1	1	1	.	.	1	.	.

Author – D.M.Yakushenko;

1 – 31.07.2003, Zhytomyr Region, Korostyshiv District, 1 km east of Velyki Kosharyshcha village (Yakushenko 2004, rel. 1);

2 – 31.07.2003, Zhytomyr Region, Korostyshiv District, 1 km east of Velyki Kosharyshcha village (Yakushenko 2004, rel. 2);

3 – 31.07.2003, Zhytomyr Region, Korostyshiv District, 1 km east of Velyki Kosharyshcha village (Yakushenko 2004, rel. 3);

4 – 31.07.2003, Zhytomyr Region, Korostyshiv District, 1 km east of Velyki Kosharyshcha village (Yakushenko 2004, rel. 4);

5 – 07.07.2003, Rivne Region, Berezne District, near Hubkiv village (Yakushenko 2004, rel. 5);

6 – 20.07.2003, Zhytomyr Region, Zhytomyr District, 1 km north-east of Levkiv village (Yakushenko 2004, rel. 6);

7 – 20.07.2003, Zhytomyr Region, Zhytomyr District, 1 km north-east of Levkiv village (Yakushenko 2004, rel. 7);

8 – 20.07.2003, Zhytomyr Region, Zhytomyr District, 1 km north-east of Levkiv village (Yakushenko 2004, rel. 8).

A.5. *Quercus roboris*-*Tilia cordata*

Table 58. Mercurialo-Quercetum roboris Bulokhov et Solomeshch 2003 emend.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Tree layer	70	80	90	80	80	75	60	95	95	85	90	75	80	95	85	60	60	85	85	85	75	90
Shrub layer	30	10	0	30	10	70	95	5	20	30	50	25	6	10	30	50	20	45	0	60	65	20
Herb layer in summer relevé	60	50	35	35	60	12	18	30	50	60				45	35	70	40	45				
Herb layer in spring relevé											25	65	60						35	30	45	30
Number of vascular plants species	32	24	22	28	27	36	28	21	23	32	15	25	36	31	34	30	25	25	25	20	27	25
Point number on Fig. 15	1	1	1	1	1	1	1	1	1	1	3	3	1	1	1	2	2	4	3	3	3	3
Nomenclatural type of subass. calamagrostietosum arundinaceae				*																		
Syntaxon				1				2					3									

D Mercurialo-Quercetum calamagrostietosum

Calamagrostis arundinacea	2	2	+	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Frangula alnus	1	.	+	1	+	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Orthilia secunda	+	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Pteridium aquilinum	.	1	+	+	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Solidago virgaurea	+	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Trientalis europaea	+	+	.	+	.	1	1	.	.	.	.	.	.	+	.	+	+	.	.	.	.	.
Vaccinium myrtillus	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

D Mercurialo-Quercetum corydaletosum

Allium ursinum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Corydalis cava	.	.	.	.	.	.	.	.	.	.	.	.	.	2	4	1	5	3	+	+	+	1
Corydalis intermedia	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	1
Gagea lutea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	1	+	+	1
Gagea minima	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	.
Lamium maculatum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	+	.	+	.
Urtica dioica	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	1	+	+	+	+

Reg. Ch Quercus-Tilion

Carex pilosa	2	4	3	3	4	1	.	+	4	1	1	5	.	4	2	2	4	.	.	.	.
Carpinus betulus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Stellaria holostea	2	2	2	2	2	1	1	2	1	2	+	2	4	2	2	3	1	2	.	1	2	2
Tilia cordata	2	+	3	2	2	.	.	3	2	+	+	4	5	3	2	.	+	3	3	2	2	4

Ch Fagetalia sylvaticae

Anemone ranunculoides	+	+	+	2	3	1	2	1	2	3	+	1	2	3	2	2
Ficaria verna	.	.	.	.	.	.	.	.	.	.	1	+	.	.	.	3	+	2	1	1	1	2
Corydalis solida	.	.	.	.	.	.	.	.	.	.	1	.	.	.	2	+	.	2	2	.	.	.
Glechoma hirsuta	.	.	.	.	.	.	1	+	1	2	.	1	2	+	1	.	.	1	+	1	+	+
Mercurialis perennis	.	.	.	.	.	+	1	2	1	1	.	.	+	2	+	.	.	2	+	.	+	.
Paris quadrifolia	.	.	.	.	.	+	+	.	+	1	.	.	+	+	+	.	.	.	+	.	.	.
Polygonatum multiflorum	.	.	.	.	.	.	.	.	1	+	+	.	+	1	1	+	.	1	+	+	+	+
Pulmonaria obscura	.	.	.	.	.	.	+	+	.	2	.	+	+	+	+	.	+	.	+	+	.	+
Adoxa moschatellina	+	1	1	1
Asarum europaeum	+	1	1	+	+	+	1	1	1	2	+	+	1	1	1	+	+	1	1	1	1	+	
Carex sylvatica	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
Dryopteris filix-mas	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	+	.
Galium odoratum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	1	1	.
Impatiens noli-tangere	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lathyrus vernus	+	+	+	+	1	+	+	+	+	+	.	1	1	+	+	+	+	+	.	.	+	+	
Milium effusum	.	.	.	+	.	.	.	.	.	+	.	.	.	+	.	1	+	.	+	.	.	.
Ulmus glabra	.	.	.	.	.	.	.	.	.	.	2	.	+	.	.	.	.	.	.	+	+	.

Ch Quercus-Fagetea

Acer campestre	.	.	.	+	+	+	+	.
Acer platanoides	2	+	+	2	2	+	+	2	2	2	4	2	+	+	2	2	+	+	4	3	3	3	
Aegopodium podagraria	+	.	+	+	+	+	+	1	1	3	.	1	1	1	+	2	2	1	1	1	2	1	
Anemone nemorosa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	.	.	.	.	.
Campanula trachelium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Carex digitata	+	1	+	.	.	1	1	.	.	+	.	1	.	.	.	.	.	.	.	.	.	.
Corylus avellana	4	2	+	4	2	5	5	1	2	4	2	4	1	2	3	5	+	3	.	.	5	3	

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
<i>Picea abies</i>	+	
<i>Pinus sylvestris</i>	.	2	.	.	3	.	.	.	.	3	.	.	.	2	.	.	2	3	.	.	.	.
<i>Populus tremula</i>	.	.	.	2	.	4	.	.	.	2	2	.	2	.	.	.	.	.	.	.	.	2
<i>Quercus robur</i>	4	5	5	5	5	1	.	5	5	5	4	3	2	5	5	4	5	4	4	4	5	.	
<i>Tilia cordata</i>	2	.	3	2	2	.	.	3	2	.	.	4	5	3	2	.	.	3	3	2	2	4	
<i>Ulmus glabra</i>	2	.	.	.	.	.	.	.	+	.	.	.
<i>Ulmus minor</i>	2	.	.	.	.	.	.	.	.	.	2	.	
0.5-5.0 m																							
<i>Acer campestre</i>	.	.	.	+	+	+	+	
<i>Acer platanoides</i>	.	+	.	+	+	.	.	+	.	.	+	.	.	.	+	.	.	+	.	.	+	.	
<i>Carpinus betulus</i>	+
<i>Corylus avellana</i>	4	2	+	4	2	5	5	1	2	4	2	4	1	2	3	5	+	3	.	.	5	3	
<i>Euonymus europaea</i>
<i>Euonymus verrucosa</i>	1	+	+	+	.	1	1	+	.	+	+	+	+	+	.	.	.	+	+	+	+	+	
<i>Frangula alnus</i>	1	.	+	1	+	1	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
<i>Fraxinus excelsior</i>	+	.	.	
<i>Malus sylvestris</i>	+	
<i>Padus avium</i>	.	.	+	+	+	1	.	1	2	.	.	.	1	1	2	2	+	+	.	.	.	.
<i>Picea abies</i>	+	
<i>Populus tremula</i>	.	.	.	+	+	.	.	+	
<i>Quercus robur</i>	.	.	+	.	.	+	.	.	.	+	
<i>Rubus idaeus</i>	+	.	.	.	
<i>Sorbus aucuparia</i>	1	+	+	1	+	1	.	.	.	+	.	+	.	.	+	+	.	.	.	.	.	.
<i>Swida sanguinea</i>	+	
<i>Tilia cordata</i>	.	+	+	+	.	.	.	+	+	+	+	.	+	+	2	.	+	.	+	+	.	+	
<i>Ulmus glabra</i>	+	.	+	+	+	
<i>Viburnum opulus</i>	.	.	.	+	+	+	.	.	.	+	
< 0.5 m																							
<i>Acer campestre</i>	.	.	.	+	
<i>Acer platanoides</i>	.	.	+	+	+	+	+	+	+	+	.	.	+	+	+	.	+	+	
<i>Fraxinus excelsior</i>	+	+
<i>Padus avium</i>	+	
<i>Picea abies</i>	+	
<i>Populus tremula</i>	.	.	.	+	+	+	
<i>Quercus robur</i>	.	+	+	.	.	+	.	.	+	+	+	
<i>Rubus nessensis</i>	
<i>Tilia cordata</i>	+	+	.	.	.	+	+	.	.	+	
<i>Ulmus glabra</i>	+	+	

Syntaxa: 1 – Mercurialo-Querquetum roboris calamagrostietosum arundinaceae, 2 – Mercurialo-Querquetum roboris typicum, 3 – Mercurialo-Querquetum roboris corydaletosum cavae

- 1 – Panchenko S.M. (22.07.1999), Sumy Region, Seredyna Buda District, Starohutske forestry (Desnyansko-Starohutsky National Nature Park), sq. 81 (Panchenko & Onyshchenko 2003: tab., rel. 13);
2 – Panchenko S.M. (01.08.1999), Sumy Region, Seredyna Buda District, Starohutske forestry (Desnyansko-Starohutsky National Nature Park), sq. 83 (Panchenko & Onyshchenko 2003: tab., rel. 16);
3 – Panchenko S.M. (01.08.1999), Sumy Region, Seredyna Buda District, Starohutske forestry (Desnyansko-Starohutsky National Nature Park), sq. 57 (Panchenko & Onyshchenko 2003: tab., rel. 18);
4 – Panchenko S.M. (01.08.1999), Sumy Region, Seredyna Buda District, Starohutske forestry (Desnyansko-Starohutsky National Nature Park), sq. 57 (Panchenko & Onyshchenko 2003: tab., rel. 19);
5 – Panchenko S.M. (31.07.1999), Sumy Region, Seredyna Buda District, Starohutske forestry (Desnyansko-Starohutsky National Nature Park), sq. 39 (Panchenko & Onyshchenko 2003: tab., rel. 21);
6 – Panchenko S.M. (08.06.1997), Sumy Region, Seredyna Buda District, Starohutske forestry (Desnyansko-Starohutsky National Nature Park), sq.95 (Panchenko & Onyshchenko 2003: tab., rel. 8);
7 – Panchenko S.M. (10.06.1997), Sumy Region, Seredyna Buda District, Starohutske forestry (Desnyansko-Starohutsky National Nature Park), sq.95 (Panchenko & Onyshchenko 2003: tab., rel. 23);
8 – Panchenko S.M. (02.07.1998), Sumy Region, Seredyna Buda District, Starohutske forestry (Desnyansko-Starohutsky National Nature Park), sq. 84 (Panchenko & Onyshchenko 2003: tab., rel. 24);
9 – Panchenko S.M. (02.07.1998), Sumy Region, Seredyna Buda District, Starohutske forestry (Desnyansko-Starohutsky National Nature Park), sq. 84 (Panchenko & Onyshchenko 2003: tab., rel. 25);
10 – Panchenko S.M. (26.04.1998+01.07.1998), sq. 69 (Panchenko & Onyshchenko 2003: tab., rel. 26);
11 – Panchenko S.M. (09.05.2003), Chernihiv Region, Korop District, near Vyshenky village;
12 – Panchenko S.M. (09.05.2003), Chernihiv Region, Korop District, near Vyshenky village;
13 – Panchenko S.M. (28.04.2000), Sumy Region, Seredyna Buda District, Starohutske forestry (Desnyansko-Starohutsky National Nature Park), sq. 83 (Panchenko & Onyshchenko 2003: tab., rel. 27);
14 – Panchenko S.M. (27.04.1998+02.07.1998), Sumy Region, Seredyna Buda District, Starohutske forestry (Desnyansko-Starohutsky National Nature Park), sq. 84 (Panchenko & Onyshchenko 2003: tab., rel. 28);

- 15 – Panchenko S.M. (27.04.1998+30.06.1998), Sumy Region, Seredyna Buda District, Starohutske forestry (Desnyansko-Starohutsky National Nature Park), sq. 84 (Panchenko & Onyshchenko 2003: tab., rel. 30).
- 16 – Lukash O.V. (06.08.2006+02.05.2005), Cherkhiv Region, Koriukivka District;
- 17 – Lukash O.V. (06.08.2006+24.04.2006), Cherkhiv Region, Sosnytsia District;
- 18 – Chornous O.P., Sumy Region.
- 19 – Panchenko S.M. (09.05.2003), Cherkhiv Region, Korop District, near Vyshenky village (Panchenko & Onyshchenko 2005: tab. 2, rel. 37);
- 20 – Panchenko S.M. (09.05.2003), Cherkhiv Region, Korop District, near Vyshenky village (Panchenko & Onyshchenko 2005: tab. 2, rel. 36);
- 21 – Panchenko S.M. (10.05.2003), Cherkhiv Region, Korop District, reserve “Sverdlovsky” (Panchenko & Onyshchenko 2005: tab. 2, rel. 38);
- 22 – Panchenko S.M. (11.05.2003), Cherkhiv Region, Korop District, landscape reserve “Rykhlivska Dacha” (Panchenko & Onyshchenko 2005: tab. 2, rel. 35).

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27		
<i>Polygonatum multiflorum</i>	+	+	+	+	+	+	.	+	+	+	+	+	+	+	+	+	+	+	+	+	+	.	+	.	+	.			
<i>Scrophularia nodosa</i>	+		
<i>Ulmus glabra</i>	1	.	.	+	+	.	.	.	+	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Viola reichenbachiana</i>	+	.	.	.		
Other species																													
<i>Acer campestre</i>	+	1	2	2	5	2	3	3	3	4	3	1	4	3	4	4	3	5	3	1	.	+	4	+	3	+	5		
<i>Acer platanoides</i>	2	2	2	2	3	3	1	4	4	1	2	4	1	2	1	2	4	+	4	2	.	3	+	3	+	2	.		
<i>Acer tataricum</i>	.	.	+	1	.	.	.	+	.	2	.	+	.	.	.	1	.	.	.	2	.	+		
<i>Aegonychon purpureocaeruleum</i>	+	1	.	.		
<i>Aegopodium podagraria</i>	.	1	.	1	1	2	1	.	.	.	2	.	.	.	.	.	.	.	.	+	1	2	.	4	+	.	+
<i>Alliaria petiolata</i>	+	+		
<i>Anthriscus sylvestris</i>	+		
<i>Astragalus glycyphyllos</i>	+	.	+	
<i>Brachypodium sylvaticum</i>	.	.	+	.	.	+	+	+	1	.	.	+	.	.	.	.	.	.	.	.	.
<i>Campanula rapunculoides</i>	+	.	.		
<i>Campanula trachelium</i>	+	+	.		
<i>Carex spicata</i>	.	.	+	.	.	.	+	+	.	+	.	.	+	1	.	.	.	+	.	.	.	.	.	.	.	.	.
<i>Carex michelii</i>	+		
<i>Carex rhizina</i>	.	.	.	+	+	.	.	.	1	.	.	.	.	.	.	.	.	.	.	+	.
<i>Carpinus betulus</i>	3	4	2	+	.	+	
<i>Cerasus avium</i>	2	.	.	.		
<i>Clinopodium vulgare</i>	+		
<i>Cornus mas</i>	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Crataegus curvisepala</i> s.l.	.	+	+	.	.	.	+	+	.	+	.	.	+	.	+	+	.	+	+		
<i>Dictamnus gymnostylis</i>	+	+	2	.	.	+	.	.	.	.	.	.	.	.	.
<i>Elymus caninus</i>	1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Euonymus europaea</i>	.	+	+	1	.	.	1	1	1	.	1	.	2	.	.	+	.	1	.	+	1	.	.	.	.	.	+
<i>Euonymus verrucosa</i>	2	+	1	+	.	1	.	1	1	+	1	2	2	5	3	1	2	3	+	2	1	+	.	.	.	+	+		
<i>Fallopia dumetorum</i>	+		
<i>Fragaria viridis</i>	+		
<i>Fraxinus excelsior</i>	3	2	5	4	3	4	3	4	4	4	4	4	4	3	2	4	3	4	1	.	.	+	+	2	2	+	.		
<i>Galeopsis</i> sp.	+		
<i>Galium aparine</i>	+	1	.	.	.	.	+	.	.	.	.
<i>Geum urbanum</i>	+	.	.	.	+	.	+	+	+	.	.	.	+	+	.	+	.	.	.		
<i>Hylotelephium polonicum</i>	+	.	.	
<i>Hypericum hirsutum</i>	+	.	.	
<i>Lapsana communis</i>	+		
<i>Lathyrus niger</i>	.	+	+		
<i>Malus sylvestris</i>	+	.	.	+		
<i>Poa nemoralis</i>	.	.	+	+	.	.	+	+	.	+	.	+	1	.	1	+	+	.	+	
<i>Polygonatum odoratum</i>	+	
<i>Prunella vulgaris</i>	+	
<i>Pulmonaria mollis</i>	+	.	.	
<i>Pyrus communis</i>	.	+	1	+	.	+	+	.	+	.	.	+	+	
<i>Quercus robur</i>	3	4	2	5	3	4	4	4	3	3	3	3	3	4	4	3	4	4	5	4	4	5	4	4	4	5	4		
<i>Ranunculus cassubicus</i>	+	.	.	+	+
<i>Rosa canina</i>	+	
<i>Rosa pomifera</i>	+	
<i>Scutellaria altissima</i>	+	+	.	.	+	.	
<i>Tulipa quercetorum</i>	.	+	.	+	.	.	2	1	.	+	.	1	1	+	.	+	.	1	
<i>Ulmus laevis</i>	+	.	.	.	+	
<i>Ulmus minor</i>	.	+	1	.	2	.	2	.	.	1	.	+	2	1	+	1	.	2	2	
<i>Ulmus suberosa</i>	.	.	.	+	+	
<i>Viburnum lantana</i>	+	
<i>Vincetoxicum scandens</i>	+	
<i>Viola odorata</i>	.	+	+	+	.	.	.	+	.	.	+	+	+	+	+	.	.	
<i>Viola tanaitica</i>	+	
Distribution of trees and shrubs by height > 5.0 m																													

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
<i>Acer campestre</i>	.	+	2	1	5	1	2	2	2	4	2	1	2	2	2	3	3	2	.	.	.	.	4	+	3	+	4	
<i>Acer platanoides</i>	2	2	2	2	3	2	.	3	3	.	2	4	1	2	1	2	4	.	.	1	.	3	+	3	+	2	.	
<i>Acer tataricum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	2	.	+	
<i>Carpinus betulus</i>	3	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	2	+	.	+	
<i>Cerasus avium</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.
<i>Fraxinus excelsior</i>	3	2	5	4	3	2	.	3	3	4	4	4	4	2	1	4	3	4	.	.	.	+	+	2	2	+	.	
<i>Malus sylvestris</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Pyrus communis</i>	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Quercus robur</i>	3	4	2	5	3	4	4	4	3	3	3	3	3	4	4	3	4	4	5	4	4	5	4	4	4	5	4	
<i>Tilia cordata</i>	3	2	2	.	4	4	3	.	2	2	3	2	.	1	+	2	.	.	.	5	3	3	3	4	3	4	2	
<i>Ulmus glabra</i>	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Ulmus minor</i>	.	+	1	.	.	.	.	.	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0.5-5.0 m																												
<i>Acer campestre</i>	.	1	1	1	1	1	2	3	2	3	2	.	3	2	4	2	2	3	3	1	.	+	.	+	+	+	2	
<i>Acer platanoides</i>	1	+	1	1	1	2	.	2	1	1	1	2	+	1	.	+	1	.	4	2	.	.	.	+	.	+	.	
<i>Acer tataricum</i>	.	.	.	.	.	.	.	.	1	.	.	.	+	.	1	.	.	.	.	1	.	.	.	.	.	.	.	.
<i>Carpinus betulus</i>	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
<i>Cornus mas</i>	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Corylus avellana</i>	.	+	.	.	2	1	.	2	2	+	4	1	.	+	.	+	+	.	.	2	1	.	+	.	.	.	.	.
<i>Crataegus curvisepala</i>	.	+	.	.	.	.	.	+	+	.	.	.	.	+	.	+	+	.	+	.	.	.	.	.	.	.	.	.
<i>Euonymus europaea</i>	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Euonymus verrucosa</i>	1	.	+	.	.	1	.	.	1	.	1	1	4	2	1	2	.	.	2	1	.	.	.	.	.	.	.	.
<i>Fraxinus excelsior</i>	.	+	.	+	+	2	2	2	.	.	.	.	+	.	1	1	.	+	.	.	.	.	+	.	.	.	.	.
<i>Malus sylvestris</i>	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Pyrus communis</i>	.	+	+	.	.	.	.	.	.	+	.	+	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Quercus robur</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Swida sanguinea</i>	.	+	+	+	1	+	.	+	.	+	1	+	.	.	.	+	+	.	2	+	1	+	.	+	.	.	.	.
<i>Tilia cordata</i>	1	+	1	+	1	1	2	2	+	2	+	.	.	1	+	+	+	.	+	+	.	+	.	+	+	+	+	.
<i>Ulmus glabra</i>	1	.	.	+	+	.	.	.	+	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Ulmus laevis</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Ulmus minor</i>	.	.	1	.	2	.	2	.	.	1	.	+	2	1	+	1	.	2	2	.	.	.	.	.	.	.	.	.
<i>Ulmus suberosa</i>	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
< 0.5 m																												
<i>Acer campestre</i>	+	+	1	1	+	+	1	1	1	1	1	+	1	.	1	1	1	3	1	.	.	.	+	.	.	.	.	.
<i>Acer platanoides</i>	+	+	1	+	1	1	1	1	.	.	1	.	.	2	.	+	+	+	1	+	.	.	.	.	.	.	.	.
<i>Acer tataricum</i>	.	.	+	.	.	.	.	.	.	.	.	.	+	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Carpinus betulus</i>	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Cornus mas</i>	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Corylus avellana</i>	.	.	.	+	.	2	+	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
<i>Crataegus curvisepala</i>	.	.	+	.	.	.	.	.	.	+	.	.	.	+	.	+	+	.	+	.	.	.	.	.	.	.	.	.
<i>Euonymus europaea</i>	.	+	+	1	.	.	1	1	1	.	1	.	1	.	.	+	.	1	.	+	1	.	.	.	.	.	.	+
<i>Euonymus verrucosa</i>	1	+	1	+	.	+	.	1	1	+	.	1	2	3	3	.	+	3	+	+	+	+	.	.	.	.	+	+
<i>Fraxinus excelsior</i>	+	+	.	+	1	2	2	2	1	2	1	1	1	1	2	+	+	2	1	.	.	.	.	.	.	.	.	.
<i>Pyrus communis</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
<i>Quercus robur</i>	.	.	.	+	+	.	+	.	.	.	.	.	.	.	.	+	+	.	+	.	.	.	.	.	.	.	.	.
<i>Rosa canina</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Rosa pomifera</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Swida sanguinea</i>	.	.	+	.	+	.	+	.	.	.	.	+	.	.	.	+	.	+	+	.	+	.	.	.	.	.	.	.
<i>Tilia cordata</i>	+	.	+	.	.	+	1	.	+	1	+	.	.	.	.	+	.	+	.	+	.	+	.	.	.	.	.	.
<i>Tulipa quercetorum</i>	.	+	.	+	.	.	2	1	.	+	.	1	1	+	.	+	.	1	.	.	.	.	.	.	.	.	.	.
<i>Ulmus glabra</i>	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Ulmus laevis</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Ulmus minor</i>	.	+	1	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
<i>Viburnum lantana</i>	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

1 – Onyshchenko V.A. (08.04.2001 +31.08.2001), Kirovohrad Region, Znamianka District, Chorny Lis forest, Bohdanivske forestry, sq. 29 (Onyshchenko & Sidenko 2002: tab. 1, rel. 31);

2 – Onyshchenko V.A. (08.04.2001 +31.08.2001), Kirovohrad Region, Znamianka District, Chorny Lis forest, Bohdanivske forestry, sq. 29 (Onyshchenko & Sidenko 2002: tab. 1, rel. 37);

3 – Onyshchenko V.A. (18.04.2006 +10.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry, sq. 52 (Onyshchenko et al. 2007: tab. 1, rel. 12);

- 4 – Onyshchenko V.A. (18.04.2006 +10.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry, sq. 51 (Onyshchenko et al. 2007: tab. 1, rel. 7);
 5 – Onyshchenko V.A. (18.04.2006 +10.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry, sq. 43 (Onyshchenko et al. 2007: tab. 1, rel. 8);
 6 – Onyshchenko V.A. (18.04.2006 +10.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry, sq. 4 (Onyshchenko et al. 2007: tab. 1, rel. 13);
 7 – Karpenko O.Yu. (18.04.2006 +10.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry, sq. 51 (Onyshchenko et al. 2007: tab. 1, rel. 9);
 8 – Karpenko O.Yu. (18.04.2006 +10.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry, sq. 19 (Onyshchenko et al. 2007: tab. 1, rel. 15);
 9 – Dyakova O.V. (19.04.2006 +11.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Mayatske forestry, sq. 95 (Onyshchenko et al. 2007: tab. 1, rel. 6);
 10 – Dyakova O.V. (18.04.2006 +10.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry, sq. 56 (Onyshchenko et al. 2007: tab. 1, rel. 11);
 11 – Dyakova O.V. (18.04.2006 +10.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry, sq. 26 (Onyshchenko et al. 2007: tab. 1, rel. 16);
 12 – Dyakova O.V. (18.04.2006 +10.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry, sq. 8 (Onyshchenko et al. 2007: tab. 1, rel. 10);
 13 – Dyakova O.V. (19.04.2006 +11.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Mayatske forestry (Onyshchenko et al. 2007: tab. 1, rel. 22);
 14 – Dyakova O.V. (19.04.2006 +11.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Mayatske forestry, sq. 115 (Onyshchenko et al. 2007: tab. 1, rel. 17);
 15 – Dyakova O.V. (19.04.2006 +11.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Mayatske forestry, sq. 97 (Onyshchenko et al. 2007: tab. 1, rel. 4);
 16 – Onyshchenko V.A. (19.04.2006 +11.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Mayatske forestry (Onyshchenko et al. 2007: tab. 1, rel. 18);
 17 – Onyshchenko V.A. (19.04.2006 +11.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Mayatske forestry, sq. 100 (Onyshchenko et al. 2007: tab. 1, rel. 19);
 18 – Karpenko Yu.O. (19.04.2006 +11.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Mayatske forestry (Onyshchenko et al. 2007: tab. 1, rel. 5);
 19 – Karpenko Yu.O. (19.04.2006 +11.08.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Mayatske forestry, sq. 95 (Onyshchenko et al. 2007: tab. 1, rel. 20);
 20 – Onyshchenko V.A. (20.04.2006 +11.08.2006), Kharkiv Region, Kharkiv District, forest west of railway station “Vasyshcheve”;
 21 – Onyshchenko V.A. (20.04.2006) + Karpenko Yu.O. (12.08.2006), Kharkiv Region, Kharkiv District, forest west of railway station “Vasyshcheve”;
 22 – Nedorub O.Yu., Poltava Region, Dykanka District;
 23 – Nedorub O.Yu., Poltava Region, Dykanka District;
 24 – Nedorub O.Yu., Poltava Region, Dykanka District;
 25 – Nedorub O.Yu., Poltava Region, Dykanka District;
 26 – Nedorub O.Yu., Poltava Region, Dykanka District;
 27 – Nedorub O.Yu., Poltava Region, Dykanka District.

Table 60. Subass. *Stellario holostea-Aceretum platanoidis parietosum quadrifoliae* Bajrak 1996

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Exposition	N	NW	S	S	NW	-	N	N	N			-	-	-	-	NW	
Inclination	2	15	1	3	15	0	25	25	17			0	0	0	0	8	
Tree layer	80	80	80	80	80	85	95	90	95			70	85	80	80	90	60
Shrub layer	40	25	20	40	20	25	5	20	10			15	2	2	1	2	
Herb layer in summer relevé	5	50	5	50	50	18						35	30	18	15	15	35
Herb layer in spring relevé	25	2	5	20	20	18	45	70	70			3	50	50	40	50	
Mosses	0	0	0	0	0	0	0	0	0			0	0	0	0	0	
Area (sq. m)	625	200	625	625	625	625	100	100	100	2500	2500	900	400	400	900	900	
Number of vascular plants species	21	21	23	23	26	27	30	28	28	30	21	24	24	25	29	31	23
Point number on Fig. 16	4	5	5	5	5	5	3	3	3	2	2	1	1	1	1	1	2
Nomenclatural type																	*

D subass. parietosum quadrifoliae

Alliaria petiolata
 Chaerophyllum temulum
 Ficaria verna

+	.	+	.	.	+	.	.	.	+	.	3	.	.	.	.	.	.
.	.	+	.	.	+	.	.	.	+	+	+	.
.	2	.	+	1	.	1	2	2	.	3	.	2	3	3	1	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
Lamium maculatum	1	.	.	.	.	.	+	2	1	2	.	+	+	+	+	+	.
Sambucus nigra	1	.	+	.	.	.	.	.	.	.	.	.	.	+	+	.	+
Urtica dioica	+	+	.	+	+	+	+	1	+	4	.	+	2	+	2	+	.	
D subass. caricetosum pilosae																		
Carex pilosa	+
Convallaria majalis	+	+	+
Melica picta	+
D Stellario-Aceretum versus																		
Tulipo-Quercetum																		
Acer platanoides	5	1	3	+	2	2	5	4	5	2	3	2	.	.	+	2	3	
Aegopodium podagraria	.	4	.	4	4	.	3	3	3	+	.	.	3	3	+	1	4	
Corylus avellana	.	2	.	4	1	.	.	3	2	.	+	.	1	1	.	1	.	
Dentaria quinquefolia	.	.	+	+	.	+	.	.	+	.	.	.	.	.	.	.	.
Glechoma hirsuta	1	.	.	.	.	+	.	+	+	.	.	.	1	+	+	+	.
Swida sanguinea	.	1	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.
Mercurialis perennis	.	.	.	.	.	.	+	+	+	.	+	.	.	.	+	+	+
Pulmonaria obscura	+	+	+	+	+	.	+	+	+	+	+	+	+	.	+	+	+	
Viola mirabilis	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	1
Ch Scillo sibericae-Quercion																		
Corydalis marschalliana	.	.	.	+	1	1	.	.	.	.	.	.	.	.	.	2	+
Scilla siberica	1	+	1	1	1	+	1	2	2	.	2	.	+	1	+	1	+	
Reg. ch Scillo sibericae-Quercion																		
Stellaria holostea	+	+	+	.	1	2	+	+	+	+	3	+	1	+	+	+	3	
Tilia cordata	4	2	.	.	4	+	2	+	.	4	2	+	3	3	4	2	3	
Ch Fagetalia sylvatica																		
Actaea spicata	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.
Adoxa moschatellina	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	2
Allium ursinum	.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.
Anemone ranunculoides	2	+	2	2	2	2	3	3	4	.	+	.	4	.	3	3	.	
Asarum europaeum	1	2	+	2	2	+	1	+	+	.	.	.	1	+	.	2	1	
Corydalis cava	.	.	.	.	.	.	1	.	.	.	.	.	+	3	+	3	.
Corydalis solida	2	.	+	1	+	2	2	2	2	.	1	+	.	.	1	.	.	
Dentaria bulbifera	.	.	.	.	.	.	.	+	2	.	.	.	.	.	.	.	.
Dryopteris filix-mas	.	.	.	.	.	.	+	+	+	+	.	.	.	.	.	.	.
Gagea lutea	.	+	.	1	1	1	+	+	+	.	+	.	+	+	+	+	.	
Gagea minima	.	.	.	.	.	.	+	.	+	.	+	.	.	.	.	.	.
Galium odoratum	.	.	.	+	+	.	.	3	.	.	.	+	.	.	.	.	.
Impatiens noli-tangere	.	.	.	.	.	.	+	2	+	+	.	.	.	.	.	.	.
Lathyrus vernus	+	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+
Paris quadrifolia	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	+
Polygonatum multiflorum	+	+	+	+	+	1	+	+	+	+	+	+	+	+	.	.	+	
Scrophularia nodosa	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
Stachys sylvatica	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.
Ulmus glabra	.	.	.	.	.	1	.	.	.	.	.	.	+	.	+	2	+
Other species																		
Acer campestre	2	4	3	3	4	4	.	2	2	3	+	2	2	3	1	4	2	
Acer tataricum	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	.
Aethusa cynapium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
Anthriscus sylvestris	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Betula pendula	.	.	.	.	.	.	2	4	.	.	.	.	.	.	.	.	.
Campanula rapunculoides	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Carex spicata	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Carpinus betulus	.	.	.	.	.	.	.	.	.	.	.	4	1	1	+	1	1
Cerasus avium	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.
Chelidonium majus	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.
Crataegus curvisepala	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	+	.
Dryopteris carthusiana	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
Epipactis helleborine	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
Euonymus europaea	+	+	+	1	1	+	+	.	1	+	.	+	+	+	+	+	+	
Euonymus verrucosa	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	1
Fallopia dumetorum	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Festuca gigantea	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
Fraxinus excelsior	.	4	4	+	3	4	2	4	3	2	3	5	3	1	4	3	.	
Galium aparine	.	.	.	.	.	.	.	.	.	+	1	2	+	+	2	1	.
Geranium robertianum	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
Geum urbanum	+	.	+	.	.	+	+	.	.	+	+	.	+	.	.	+	.	
Glechoma hederacea	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Lapsana communis	+	.	.
Lathraea squamaria	1	+	+	.	.	.	.	.	.	.	.
Malus sylvestris	.	.	.	+	.	+
Moehringia trinervia	+
Poa nemoralis	+
Polygonatum odoratum	+
Populus tremula	+	2	2	.	2	.
Pyrus communis	.	3	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.
Quercus robur	4	.	4	5	+	2	4	.	.	4	.	4	4	4	3	3	3
Ranunculus cassubicus	+
Rorippa sylvestris	+
Tulipa quercetorum	+	+	+
Ulmus laevis	.	+	+	2	+	+	.	.	.	.	.	.	+
Ulmus minor	.	1	+	2	1	+	.	.	.	.	.	1	.	.	.	+	.
Veronica hederifolia	+
Viburnum lantana	+
Viola odorata	.	.	+	.	.	1	.	.	.	+	.	+	+	+	+	+	.
Distribution of trees and shrubs by height																	
> 5.0 m																	
Acer campestre	2	4	1	3	3	3	.	.	2	3	+	+	2	3	1	4	-
Acer platanoides	3	.	3	.	2	2	5	4	5	2	3	1	.	.	.	2	-
Betula pendula	2	4	.	.	.	.	.	.	.	.	-
Carpinus betulus	4	.	1	.	1	1	-
Cerasus avium	2	.	.	.	.	.	-
Corylus avellana	+	1	.	.	-
Fraxinus excelsior	.	4	4	.	3	4	2	4	3	2	3	4	3	1	4	3	-
Malus sylvestris	+	-
Populus tremula	2	2	.	2	-
Pyrus communis	.	3	.	.	+	.	.	.	.	.	.	.	.	.	.	.	-
Quercus robur	4	.	4	5	+	2	4	.	.	4	.	4	4	4	3	3	-
Tilia cordata	4	2	.	.	4	+	2	.	.	4	2	.	3	3	4	2	-
Ulmus glabra	1	.	.	.	.	.	.	.	.	2	.	-
Ulmus laevis	2	.	+	.	.	.	.	.	.	-
Ulmus minor	.	.	.	2	+	.	.	.	.	.	.	.	.	.	.	.	-
0.5-5.0 m																	
Acer campestre	2	2	3	.	3	3	.	2	1	.	+	2	+	+	+	1	-
Acer platanoides	4	1	1	+	.	+	+	+	.	.	+	1	.	.	.	.	-
Acer tataricum	+	.	-
Carpinus betulus	+	1	+	+	.	.	-
Corylus avellana	.	2	.	4	1	.	.	3	2	.	+	.	1	1	.	1	-
Crataegus curvisepala	.	.	+	+	-
Euonymus europaea	+	+	+	.	1	.	.	+	.	.	+	.	-
Euonymus verrucosa	+	-
Fraxinus excelsior	.	1	.	.	.	+	.	.	.	.	.	1	.	+	.	.	-
Pyrus communis	.	.	+	.	+	-
Sambucus nigra	1	.	+	.	.	.	.	.	.	.	.	.	.	+	+	.	-
Swida sanguinea	.	1	.	.	+	.	.	.	.	.	.	.	.	.	.	.	-
Tilia cordata	1	1	.	.	.	.	2	+	.	.	.	+	1	1	+	+	-
Ulmus glabra	1	.	.	.	.	.	+	.	.	+	+	-
Ulmus laevis	.	+	+	+	+	-
Ulmus minor	.	1	+	2	1	+	.	.	.	.	.	1	.	.	.	+	-
Viburnum lantana	+	-
< 0.5 m																	
Acer campestre	.	+	1	1	1	1	.	.	.	.	.	.	.	.	+	+	-
Acer platanoides	1	.	+	+	.	.	.	.	.	.	+	.	-
Acer tataricum	.	.	+	-
Carpinus betulus	+	.	.	-
Corylus avellana	.	.	.	+	+	-
Crataegus curvisepala	.	.	.	+	+	-
Euonymus europaea	+	+	+	1	1	+	.	.	.	+	.	.	+	+	+	+	-
Euonymus verrucosa	+	-
Fraxinus excelsior	.	+	+	+	1	+	+	+	.	.	.	4	+	+	.	+	-
Malus sylvestris	.	.	.	+	-
Populus tremula	+	+	+	.	+	-
Quercus robur	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	-
Swida sanguinea	.	+	.	+	-
Tilia cordata	+	-

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
<i>Ulmus glabra</i>	+	+	+	-
<i>Ulmus laevis</i>	+	-
<i>Ulmus minor</i>	.	+	.	+	.	+	+	-
<i>Viburnum lantana</i>	+	-

- 1 – Karpenko Yu.O. (12.08.2006) + Onyshchenko V.A. (19.04.2006), Kharkiv Region, Kharkiv District, forest west of railway station “Vasysheve”;
- 2 – Onyshchenko V.A. (10.08.2006+ 18.04.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry (Onyshchenko et al. 2007: tab. 1, rel. 28);
- 3 – Karpenko Yu.O. (10.08.2006+ 18.04.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry, sq. 55 (Onyshchenko et al. 2007: tab. 1, rel. 32);
- 4 – Karpenko Yu.O. (10.08.2006+ 18.04.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry, sq. 43 (Onyshchenko et al. 2007: tab. 1, rel. 29);
- 5 – Dyakova O.V. (10.08.2006+ 18.04.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry, sq. 52 (Onyshchenko et al. 2007: tab. 1, rel. 26);
- 6 – Dyakova O.V. (11.08.2006+ 19.04.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Mayatske forestry, sq. 128 (Onyshchenko et al. 2007: tab. 1, rel. 30);
- 7 – Panchenko S.M. (10.05.1998), Sumy Region, Sumy District, north of Zalizniaky village;
- 8 – Panchenko S.M. (10.05.1998), Sumy Region, Sumy District, north of Zalizniaky village;
- 9 – Panchenko S.M. (10.05.1998), Sumy Region, Sumy District, north of Zalizniaky village;
- 10 – Nedorub O.Yu., Poltava Region, Dykanka District;
- 11 – Nedorub O.Yu., Poltava Region, Dykanka District;
- 12 – Onyshchenko V.A. (31.08.2001+07.04.2006), Kirovohrad Region, Znamianka District, Chorny Lis forest, Bohdanivske forestry, sq. 73 (Onyshchenko & Sidenko 2002: tab. 1 rel. 2);
- 13 – Onyshchenko V.A. (31.08.2001+07.04.2006), Kirovohrad Region, Znamianka District, Chorny Lis forest, Znamianske forestry, sq. 64 (Onyshchenko & Sidenko 2002: tab. 1 rel. 8);
- 14 – Onyshchenko V.A. (31.08.2001+07.04.2006), Kirovohrad Region, Znamianka District, Chorny Lis forest, Znamianske forestry, sq. 68 (Onyshchenko & Sidenko 2002: tab. 1 rel. 2);
- 15 – Onyshchenko V.A. (31.08.2001+07.04.2006), Kirovohrad Region, Znamianka District, Chorny Lis forest, Znamianske forestry, sq. 97 (Onyshchenko & Sidenko 2002: tab. 1 rel. 13);
- 16 – Onyshchenko V.A. (31.08.2001+07.04.2006), Kirovohrad Region, Znamianka District, Chorny Lis forest, Znamianske forestry, sq. 97 (Onyshchenko & Sidenko 2002: tab. 1 rel. 10);
- 17 – Bajrak O.M. (22.06.1993), Poltava Region, Pyriatyn District.

Table 61. *Tulipo quercetorum*-*Quercetum roboris* ass. nov.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13
Exposition	NNE	-	N	E	E	-	-	E	SE	SW	E	N	N
Inclination	2	0	20	2	2	0	0	1	3	10	1	3	3
Tree layer	75	75	75	75	70	75	75	75	70	80	80	90	85
Shrub layer	30	20	15	25	25	15	1	15	20	40	20	5	15
Herb layer in summer relevé	25	5	35	35	10	18	40	15	20	15	30	10	30
Herb layer in spring relevé	25	20	40	40	20	15	30	30	30	25	16	35	20
Mosses	0	0	0	0	0	0	0	0	0	0	0	0	0
Area (sq. m)	400	625	625	250	625	625	625	400	625	625	625	625	625
Number of vascular plants species	36	27	36	39	33	29	28	29	26	26	28	22	21
Point number on Fig. 17	1	1	2	2	2	2	2	2	2	2	2	2	2
Nomenclatural type											*		

Ch *Tulipo quercetorum*-*Quercetum*

Tulipa quercetorum

1	1	+	1	2	1	1	+	2	2	2	2	+
---	---	---	---	---	---	---	---	---	---	---	---	---

Ch *Scilla siberica*-*Quercion*

Scilla siberica

+	2	1	1	1	1	2	+	1	1	+	2	+
---	---	---	---	---	---	---	---	---	---	---	---	---

Corydalis marschalliana

+	.	.	1	2	1	1	2	.	1	1	+	1
---	---	---	---	---	---	---	---	---	---	---	---	---

D *Tulipo quercetorum*-*Quercetum versus Stellario*

holostea*-*Aceretum

Ballota nigra

.	.	+	+	.	.	1	1	.
---	---	---	---	---	---	---	---	---	---	---	---	---

Chaerophyllum temulum

1	+	+	1	+	.	3	+
---	---	---	---	---	---	---	---	---	---	---	---	---

Cynoglossum officinale

.	.	.	.	+	.	+	.	+
---	---	---	---	---	---	---	---	---	---	---	---	---

Dactylis glomerata

+	.	.	+	+	+	+	.	+	+	.	+	1
---	---	---	---	---	---	---	---	---	---	---	---	---

Lapsana communis

+	.	+	+	.	.	+	+	.	.	.	+	.
---	---	---	---	---	---	---	---	---	---	---	---	---

Leonurus villosus

.	.	+	+	.	.	+	+
---	---	---	---	---	---	---	---	---	---	---	---	---

Scutellaria altissima

.	.	.	2	1	1	+	.
---	---	---	---	---	---	---	---	---	---	---	---	---

Torilis japonica

.	.	1	+	+	.	+	.	+	1	+	.	.
---	---	---	---	---	---	---	---	---	---	---	---	---

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13
Vincetoxicum scandens	.	.	.	.	+	.	.	.	.	.	+	.	+
Ch Fagetalia sylvaticae													
Adoxa moschatellina	+	.	.	+	.	.	.	.	.	.	.	.	.
Anemone ranunculoides	2	2	1	1	2	1	1	2	+	.	2	.	1
Corydalis solida	1	2	4	3	1	+	1	3	2	1	1	1	2
Gagea lutea	+	+	+	+	.	.	.	.	+	.	.	+	+
Gagea minima	+	+	+	1	+	.	+	.	.	.	.	+	.
Galium odoratum	.	.	+	.	.	+	+	1	.	.	1	.	+
Ficaria verna	2	+	2	3	.	.	.	.	+	+	.	1	.
Lathyrus vernus	.	.	.	.	.	+	.	.	.	1	+	.	+
Milium effusum	.	.	.	+	.	.	.	.	.	.	.	.	.
Polygonatum multiflorum	+	+	.	.	+	+	.	+	.	+	+	+	+
Pulmonaria obscura	.	+	.	.	.	.	.	.	.	.	.	.	.
Scrophularia nodosa	.	.	.	.	.	.	.	.	.	.	+	.	.
Stachys sylvatica	.	.	.	+	.	.	.	.	.	.	.	.	.
Ch Aceri tatarici-Quercion													
Acer tataricum	1	+	.	.	+	+	.	.	.	.	.	.	.
Ch Quercetalia pubescentis, Geranio-Trifolietea													
Clinopodium vulgare	.	.	+	.	.	.	.	.	+	.	.	.	.
Dictamnus gymnostylis	.	.	.	.	.	.	.	.	.	.	+	.	.
Lathyrus niger	.	.	.	.	.	.	.	.	+	.	+	.	.
Trifolium alpestre	.	.	.	.	.	.	.	.	+	.	.	.	.
Other species													
Acer campestre	2	3	4	3	4	4	4	3	2	4	3	2	3
Acer platanoides	.	3	.	.	.	.	.	.	.	.	.	.	.
Alliaria petiolata	2	+	+	+	.	+	+	+	+	+	.	+	.
Anthriscus sylvestris	+	.	.	.	.	.	.	.	.	.	.	.	.
Aristolochia clematitis	+	.	.	.	.	.	.	.	.	.	.	.	.
Brachypodium sylvaticum	.	.	.	+	+	+	+	.	.	.	.	.	1
Campanula trachelium	.	.	.	.	.	.	.	.	.	.	+	.	.
Caragana arborescens	.	.	.	.	1	.	.	.	3	.	.	.	.
Carex spicata	+	.	+	.	.	+	.	.	.	.	.	.	.
Carex digitata	.	.	.	.	.	+	.	+	.	.	.	.	.
Chelidonium majus	.	.	+	+	.	.	+	.	.	.	.	.	.
Chenopodium polyspermum	+	.	.	.	.	.	.	.	.	.	.	.	.
Chenopodium sp.	.	.	.	.	.	.	+	.	.	.	.	.	.
Convallaria majalis	+	.	.	.	.	.	.	.	.	.	.	.	.
Crataegus curvisepala s.l.	+	+	+	+	+	.	+	+	+	+	.	.	.
Cucubalus baccifer	.	.	+	.	.	.	.	.	.	.	.	.	.
Elymus caninus	.	.	.	.	.	.	.	+	.	.	.	.	.
Euonymus europaea	2	+	+	+	+	+	+	+	+	+	1	.	.
Euonymus verrucosa	.	.	.	.	1	+	.	.	.	.	.	.	.
Euphorbia sp.	.	.	.	+	.	.	.	.	.	.	.	.	.
Fallopia dumetorum	+	+	+	.	.	.	+	+	.	.	.	.	.
Festuca gigantea	.	.	+	.	.	.	.	.	.	+	1	1	1
Fraxinus excelsior	5	4	2	5	4	4	4	4	4	3	3	5	1
Galium aparine	2	.	+	+	2	.	.	.	.	1	.	.	.
Geranium robertianum	.	.	1	1	.	.	1	2	.	.	.	1	.
Geum urbanum	.	+	1	+	1	+	1	1	1	1	1	1	1
Glechoma hirsuta	+	.	.	.	.	.	.	.	.	.	.	.	.
Lactuca chaixii	.	.	+	.	.	.	+	.	.	.	.	.	.
Lamium maculatum	.	.	1	2	.	.	1	+	.	+	+	.	.
Ligustrum vulgare	.	.	.	.	+	.	.	.	.	.	.	.	.
Lonicera tatarica	.	.	.	.	+	.	.	.	.	.	.	.	.
Lysimachia verticillaris	.	.	.	+	.	.	.	.	.	.	.	.	.
Malus sylvestris	.	.	.	.	+	.	.	.	.	.	.	.	.
Melica picta	.	.	.	+	.	1	.	+	1	+	1	.	.
Moehringia trinervia	+	.	.	.	.	.	.	.	.	.	.	.	.
Morus nigra	.	.	+	.	.	.	.	.	+	.	.	.	.
Ornithogalum boucheanum	.	+	.	.	.	.	.	.	.	.	.	.	.
Poa nemoralis	+	.	.	+	1	+	.	+	.	.	2	.	2
Pyrus communis	+	+	.	.	+	+	.	+	.	.	.	+	.
Quercus robur	3	4	5	2	4	4	2	4	4	5	5	+	5
Rosa canina	.	.	.	.	+	.	.	.	.	.	.	.	.
Rubus caesius	+	.	.	.	.	.	.	.	.	.	.	.	.
Sambucus nigra	.	+	+	2	.	.	.	.	.	.	.	+	.
Stellaria holostea	+	+	+	1	+	+	.	1	2	2	.	.	3

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13
<i>Taraxacum officinale</i>	.	.	+	.	.	.	.	.	.	.	.	.	.
<i>Tilia cordata</i>	.	.	.	.	1	1	.	1	.	+	2	.	2
<i>Ulmus minor</i>	2	+	2	1	1	.	.	.	1	2	.	+	.
<i>Urtica dioica</i>	.	.	.	+	.	+	+	+	.	.	.	.	.
<i>Veronica hederifolia</i>	+	+	.	.	.	.	.	.	.	.	.	.	.
<i>Viola odorata</i> + <i>V. suavis</i>	+	+	1	2	.	+	.	+	2	+	1	1	1
Distribution of trees and shrubs													
by height													
> 5.0 m													
<i>Acer campestre</i>	.	1	.	2	2	2	4	1	.	.	+	2	2
<i>Acer platanoides</i>	.	3	.	.	.	.	.	.	.	.	.	.	.
<i>Acer tataricum</i>	1	.	.	.	.	.	.	.	.	.	.	.	.
<i>Fraxinus excelsior</i>	5	4	.	5	4	3	4	4	4	3	3	5	.
<i>Pyrus communis</i>	.	.	.	.	+	+	.	.	.	.	.	.	.
<i>Quercus robur</i>	3	4	5	2	4	4	2	4	4	5	5	.	5
<i>Tilia cordata</i>	.	.	.	.	1	1	.	1	.	.	.	.	2
<i>Ulmus minor</i>	1	.	2	.	.	.	.	.	.	2	.	+	.
0.5-5.0 m													
<i>Acer campestre</i>	2	3	3	3	3	3	.	3	2	4	3	2	3
<i>Acer platanoides</i>	.	1	.	.	.	.	.	.	.	.	.	.	.
<i>Acer tataricum</i>	+	.	.	.	+	.	.	.	.	.	.	.	.
<i>Brachypodium sylvaticum</i>	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Caragana arborescens</i>	.	.	.	.	1	.	.	.	3	.	.	.	.
<i>Carex spicata</i>	.	.	+	.	.	.	.	.	.	.	.	.	.
<i>Crataegus curvisepala</i>	+	+	.	+	+	.	.	.	+	+	.	.	.
<i>Euonymus europaea</i>	.	.	.	+	+	.	.	.	.	.	.	.	.
<i>Euonymus verrucosa</i>	.	.	.	.	.	+	.	.	.	.	.	.	.
<i>Fraxinus excelsior</i>	2	+	+	1	2	1	.	.	+	.	.	.	.
<i>Ligustrum vulgare</i>	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Lonicera tatarica</i>	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Malus sylvestris</i>	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Pyrus communis</i>	+	+	.	.	.	+	.	+	.	.	.	+	.
<i>Quercus robur</i>	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Sambucus nigra</i>	.	+	+	2	.	.	.	.	.	.	.	.	.
<i>Tilia cordata</i>	.	.	.	.	+	+	.	1	.	.	2	.	+
<i>Ulmus minor</i>	2	+	+	1	1	.	.	.	.	+	.	.	.
< 0.5 m													
<i>Acer campestre</i>	.	1	2	+	2	1	+	1	1	.	1	.	+
<i>Acer tataricum</i>	+	+	.	.	+	+	.	.	.	.	.	.	.
<i>Caragana arborescens</i>	.	.	.	.	.	.	.	.	1	.	.	.	.
<i>Crataegus curvisepala</i>	+	+	+	.	+	.	+	+	.	+	.	.	.
<i>Euonymus europaea</i>	2	+	+	+	.	+	+	+	+	.	1	.	.
<i>Euonymus verrucosa</i>	.	.	.	.	1	.	.	.	.	.	.	.	.
<i>Fraxinus excelsior</i>	+	+	2	+	1	2	1	+	1	.	1	1	1
<i>Morus nigra</i>	.	.	+	.	.	.	.	.	+	.	.	.	.
<i>Pyrus communis</i>	.	.	.	.	.	.	.	+	.	.	.	.	.
<i>Quercus robur</i>	+	.	+	.	.	+	+	+	.	+	.	+	.
<i>Rosa canina</i>	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Rubus caesius</i>	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Sambucus nigra</i>	.	.	.	+	.	.	.	.	.	.	.	+	.
<i>Tilia cordata</i>	.	.	.	.	.	.	.	+	.	+	.	.	.
<i>Ulmus minor</i>	+	+	1	.	+	.	.	.	1	.	.	.	.

1 – Onyshchenko V.A. (20.08.2006+18.04.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry;

2 – Onyshchenko V.A., Dyakova O.V., Karpenko Yu.O. (20.08.2006+18.04.2006), Donetsk Region, Slovyansk District, Sviati Hory National Nature Park, Teplynske forestry;

3 – Onyshchenko V.A. (08.08.2006+16.04.2006), Donetsk Region, near Snizhne town;

4 – Onyshchenko V.A. (08.08.2006+16.04.2006), Donetsk Region, near Snizhne town;

5 – Onyshchenko V.A. (08.08.2006+16.04.2006), Donetsk Region, near Snizhne town;

6 – Onyshchenko V.A. (08.08.2006+16.04.2006), Donetsk Region, near Snizhne town;

7 – Onyshchenko V.A. (08.08.2006+16.04.2006), Donetsk Region, near Snizhne town;

8 – Onyshchenko V.A. (08.08.2006+16.04.2006), Donetsk Region, near Snizhne town;

9 – Karpenko Yu.O. (08.08.2006+16.04.2006), Donetsk Region, near Snizhne town;

10 – Karpenko Yu.O. (08.08.2006+16.04.2006), Donetsk Region, near Snizhne town;

11 – Karpenko Yu.O. (08.08.2006+16.04.2006), Donetsk Region, near Snizhne town;

12 – Karpenko Yu.O. (08.08.2006+16.04.2006), Donetsk Region, near Snizhne town;

13 – Karpenko Yu.O. (08.08.2006+16.04.2006), Donetsk Region, near Snizhne town.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<i>Crataegus curvisepala</i>	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
<i>Crataegus orientalis</i>	+	.	.	.	+
<i>Delphinium pallasii</i>	.	.	+
<i>Dictamnus gymnostylis</i>	+	.	.	+	.
<i>Euonymus europaea</i>	.	.	.	+
<i>Euonymus latifolia</i>	+
<i>Euonymus verrucosa</i>	+	.	.	+	+	+	+	+	.
<i>Galium verum</i>	+	.	+	.	+
<i>Geranium pyrenaicum</i>	+
<i>Geum urbanum</i>	.	.	.	+	+	.	.	.	+	.	+	.	+	+	+
<i>Hedera helix</i>	.	.	+	.	.	.	+	+	.	.	+	+	+	.	+
<i>Lamium maculatum</i>	.	.	.	+
<i>Lapsana communis</i>	.	.	.	+	+	.	.	.	+
<i>Lathyrus aureus</i>	+	+	.
<i>Lathyrus rotundifolius</i>	+	.	+	+	+	+	.
<i>Ligustrum vulgare</i>	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
<i>Ornithogalum fimbriatum</i>	.	.	.	+
<i>Physocaulis nodosus</i>	.	.	+	+
<i>Piptatherum holciforme</i>	+
<i>Platanthera chlorantha</i>	+	+	.	+	.	+
<i>Poa nemoralis</i>	+	.	.	+
<i>Polygonatum hirtum</i>	1	.	.	.	.	.
<i>Polygonatum odoratum</i>	+	+	+	.	+	.	+	.	+
<i>Potentilla micrantha</i>	+	+
<i>Primula acaulis</i>	.	.	.	1	+	+	.	+	+	.	+	.	+	+	+
<i>Pyrus communis</i>	.	1	.	3	.	.	.	.	.	.	.	.	.	.	.
<i>Rosa canina</i>	+	.	.	.	+
<i>Rubus caesius</i>	.	.	.	+
<i>Rubus tauricus</i>	+
<i>Sambucus nigra</i>	+	.	.	.	+	+	.	.	.
<i>Scilla siberica</i>	.	1	.	.	-	-	-	-	-	.	-	-	-	-	-
<i>Scutellaria altissima</i>	+	+	+	.	.	.
<i>Sorbus aucuparia</i>	+	+	.
<i>Sorbus torminalis</i>	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Stellaria media</i>	.	.	+	1	.	.	.	+	.
<i>Swida sanquinea</i>	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.
<i>Symphytum tauricum</i>	+	.	.	+
<i>Tamus communis</i>	.	.	+	+	.	+	+	+	.	+
<i>Torilis japonica</i>	.	.	.	+
<i>Ulmus laevis</i>	+	.	.
<i>Ulmus minor</i>	.	+	+	+	1	.	.	.	.	.
<i>Veronica umbrosa</i>	+
<i>Viola odorata</i>	.	.	.	+	+
<i>Viola dehnhardtii</i>	+	+
Distribution of trees, shrubs and lianas by height															
> 5.0 m															
<i>Acer campestre</i>	2	1	2	.	-	-	-	-	-	2	-	-	-	-	-
<i>Carpinus betulus</i>	.	2	2	.	-	-	-	-	-	2	-	-	-	-	-
<i>Fraxinus excelsior</i>	4	4	4	2	-	-	-	-	-	4	-	-	-	-	-
<i>Pyrus communis</i>	.	1	.	3	-	-	-	-	-	.	-	-	-	-	-
<i>Quercus petraea</i>	.	4	2	4	-	-	-	-	-	4	-	-	-	-	-
<i>Sorbus torminalis</i>	.	1	.	.	-	-	-	-	-	.	-	-	-	-	-
<i>Ulmus glabra</i>	1	.	.	.	-	-	-	-	-	.	-	-	-	-	-
0.5-5.0 m															
<i>Acer campestre</i>	+	3	1	+	-	-	-	-	-	1	-	-	-	-	-
<i>Carpinus betulus</i>	.	.	+	.	-	-	-	-	-	1	-	-	-	-	-
<i>Cornus mas</i>	+	3	.	4	-	-	-	-	-	1	-	-	-	-	-
<i>Corylus avellana</i>	.	1	.	.	-	-	-	-	-	.	-	-	-	-	-
<i>Crataegus curvisepala</i>	.	.	.	1	-	-	-	-	-	.	-	-	-	-	-
<i>Euonymus verrucosa</i>	+	.	.	+	-	-	-	-	-	.	-	-	-	-	-
<i>Fraxinus excelsior</i>	.	+	.	.	-	-	-	-	-	+	-	-	-	-	-
<i>Ligustrum vulgare</i>	.	.	.	+	-	-	-	-	-	.	-	-	-	-	-
<i>Quercus petraea</i>	.	.	+	.	-	-	-	-	-	+	-	-	-	-	-
<i>Sambucus nigra</i>	+	.	.	.	-	-	-	-	-	.	-	-	-	-	-
<i>Sorbus torminalis</i>	.	+	.	.	-	-	-	-	-	.	-	-	-	-	-
<i>Swida sanquinea</i>	.	.	.	1	-	-	-	-	-	.	-	-	-	-	-
<i>Ulmus minor</i>	.	.	+	.	-	-	-	-	-	.	-	-	-	-	-

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
< 0.5 m															
<i>Acer campestre</i>	.	.	+	1	-	-	-	-	-	+	-	-	-	-	-
<i>Carpinus betulus</i>	.	.	.	+	-	-	-	-	-	.	-	-	-	-	-
<i>Cerasus avium</i>	.	.	.	+	-	-	-	-	-	.	-	-	-	-	-
<i>Cornus mas</i>	.	.	.	+	-	-	-	-	-	.	-	-	-	-	-
<i>Crataegus curvisepala</i>	.	.	.	+	-	-	-	-	-	.	-	-	-	-	-
<i>Euonymus europaea</i>	.	.	.	+	-	-	-	-	-	.	-	-	-	-	-
<i>Fraxinus excelsior</i>	.	.	.	1	-	-	-	-	-	.	-	-	-	-	-
<i>Hedera helix</i>	.	.	+	.	-	-	-	-	-	.	-	-	-	-	-
<i>Ligustrum vulgare</i>	.	.	.	1	-	-	-	-	-	.	-	-	-	-	-
<i>Pyrus communis</i>	.	.	.	+	-	-	-	-	-	.	-	-	-	-	-
<i>Quercus petraea</i>	.	+	+	+	-	-	-	-	-	.	-	-	-	-	-
<i>Rubus caesius</i>	.	.	.	+	-	-	-	-	-	.	-	-	-	-	-
<i>Tamus communis</i>	.	.	+	.	-	-	-	-	-	.	-	-	-	-	-
<i>Ulmus minor</i>	.	+	.	+	-	-	-	-	-	1	-	-	-	-	-

- 1 – Onyshchenko V.A. (15.04.2007+04.07.2007), Crimea, Kirovske District, Mt. Agarmysh;
2 – Onyshchenko V.A. (16.04.2007+05.07.2007), Crimea, Kirovske District, south of Staryi Krym;
3 – Karpenko Yu.O. (16.04.2007) + Onyshchenko V.A. (05.07.2007), Crimea, Kirovske District, south of Staryi Krym;
4 – Karpenko Yu.O. (16.04.2007) + Onyshchenko V.A. (05.07.2007), Crimea, Kirovske District, south of Staryi Krym;
5 – Crimea (Didukh 1996: tab. 3, rel. 41);
6 – Crimea (Didukh 1996: tab. 3, rel. 42);
7 – Crimea (Didukh 1996: tab. 3, rel. 43);
8 – Didukh Ya.P. (04.06.1978), Crimea, Kirovske District, Mt. Agarmysh (Didukh 1996, tab. 3, rel. 44);
9 – (Didukh 1996: tab. 3, rel. 45);
10 – Onyshchenko V.A., 15.04.2007+04.07.2007, Crimea, Kirovske District, Mt. Agarmysh;
11 – Crimea, (Didukh 1996: tab. 4, rel. 51);
12 – Crimea, (Didukh 1996: tab. 4, rel. 52);
13 – Crimea, (Didukh 1996: tab. 4, rel. 53);
14 – Crimea, (Didukh 1996: tab. 4, rel. 54);
15 – Didukh Ya.P. (11.06.1975), Crimea, Kirovske District, Mt. Agarmysh (Didukh 1996: tab. 4, rel. 55), nomenclatural type of the *Polygonato multiflori-Quercetum petraeae*.

Table 63. *Bromopsio benekenii-Carpinetum* Didukh 1996

Number in table	1	2	3	4	5	6
Exposition	SWW	-	-	-	NWW	W
Inclination	25	0	0	0	5	30
Altitude	1100	650	560	560	650	650
Tree layer	90	90	70	20	80	90
Shrub layer	0	1	15	50	0	0
Herb layer in summer relevé	30	25	30	15	10	10
Herb layer in spring relevé	10	15	30	10	10	10
Mosses	0	1	0	0	0	0
Area (sq. m)	900	900	900	200	900	900
Number of vascular plants species	47	59	62	43	29	26
Point number on Fig. 19	1	2	2	2	2	2

Reg. Ch, D *Bromopsio benekenii-Carpinetum*

<i>Bromopsis benekenii</i>	1	+	+	+	.	.
<i>Cephalanthera damasonium</i>	+	+	.	.	+	.
<i>Fragaria vesca</i>	+	+	+	.	+	+
<i>Neottia nidus-avis</i>	+	+	+	+	+	+
<i>Tilia cordata</i>	.	2	+	+	1	2

Ch *Paeonio dauricae-Quercion*

<i>Paeonia daurica</i>	+
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Ch, D *Paeonio dauricae-Quercion* and *Dentario quinquefoliae-Fagion*

<i>Arum elongatum</i>	+	1	+	+	.	.
<i>Crocus tauricus</i>	+	.	+	+	.	.
<i>Galanthus plicatus</i>	+	+	+	+	.	.
<i>Lathyrus aureus</i>	.	+	+	+	+	+
<i>Physospermum cornubiense</i>	+	.	+	+	.	.
<i>Ranunculus constantinopolitanus</i>	+	2	2	.	.	.

Number in table	1	2	3	4	5	6
<i>Scilla bifolia</i>	+	+	+	+	.	+
<i>Viola dehnhardtii</i>	+	.	+	+	+	+
D Paenion dauricae-Quercion versus						
Dentario quinquefoliae-Fagion						
<i>Carpinus betulus</i>	5	4	4	.	5	5
<i>Crataegus curvisepala</i>	+	+	+	.	.	.
<i>Poa nemoralis</i>	+	1	+	+	2	1
<i>Quercus petraea</i>	.	.	.	.	3	3
<i>Viola odorata</i>	+	+	+	+	.	.
Ch Fagetalia sylvaticae						
<i>Carex sylvatica</i>	.	.	.	+	.	.
<i>Corydalis marschalliana</i> (reg.)	.	+	1	.	.	.
<i>Corydalis paczoskii</i> (C. solida s.l.)	.	+	+	.	.	.
<i>Dentaria quinquefolia</i> (reg.)	+	1	2	1	2	3
<i>Euphorbia amygdaloides</i>	1	.	.	.	.	.
<i>Ficaria verna</i>	.	.	+	.	.	.
<i>Gagea lutea</i>	.	.	+	.	.	.
<i>Galium odoratum</i>	1	+	+	3	+	+
<i>Mercurialis perennis</i>	3	1	4	.	.	+
<i>Milium effusum</i>	.	+	+	+	.	.
<i>Pulmonaria obscura</i>	+	.	.	.	.	.
<i>Sanicula europaea</i>	.	+	+	.	.	.
<i>Stachys sylvatica</i>	.	+	.	.	.	.
<i>Ulmus glabra</i>	+	.	.	.	.	.
<i>Viola reichenbachiana</i>	.	+	.	.	.	.
Ch, D Quercetalia pubescentis						
<i>Aegonychon purpureocaeruleum</i>	.	.	1	.	.	.
<i>Betonica officinalis</i>	+	.	.	.	.	.
<i>Cornus mas</i>	.	+	2	+	.	.
<i>Lathyrus niger</i>	.	.	+	.	+	+
<i>Pyrethrum corymbosum</i>	.	.	+	.	.	.
D var. Salvia glutinosa						
<i>Campanula trachelium</i>	.	+	+	+	.	.
<i>Chaerophyllum temulum</i>	.	+	+	+	.	.
<i>Mycelis muralis</i>	.	+	+	+	.	.
<i>Salvia glutinosa</i>	.	+	+	+	.	.
<i>Sambucus nigra</i>	.	+	.	+	.	.
<i>Viburnum opulus</i>	.	.	+	+	.	.
D. var. Lathyrus laxiflorus						
<i>Lathyrus laxiflorus</i>	.	.	.	.	+	+
<i>Luzula forsteri</i>	.	.	.	.	+	+
<i>Veronica umbrosa</i>	.	.	.	.	+	+
Other species						
<i>Acer campestre</i>	+	3	4	.	.	.
<i>Anthriscus sylvestris</i>	1	+	2	1	.	.
<i>Arctium</i> sp.	.	+	+	.	.	.
<i>Brachypodium sylvaticum</i>	+	.	+	.	.	.
<i>Carex cuspidata</i>	+	.	+	.	.	.
<i>Carex digitata</i>	+	+	.	.	+	+
<i>Carpinus orientalis</i>	.	+	.	.	.	.
<i>Cephalanthera rubra</i>	.	+	.	.	.	.
<i>Cerasus avium</i>	.	2	+	.	.	.
<i>Colchicum umbrosum</i>	.	.	+	.	.	.
<i>Convallaria majalis</i>	.	.	+	.	.	.
<i>Coronilla</i> sp.	.	.	+	.	.	.
<i>Corylus avellana</i>	.	2	2	5	.	.
<i>Dactylis glomerata</i>	.	+	+	+	1	+
<i>Epipactis microphylla</i>	.	.	+	.	.	.
<i>Equisetum arvense</i>	.	+	.	.	.	.
<i>Equisetum telmateia</i>	.	+	.	.	.	.
<i>Euonymus europaea</i>	.	+	+	+	.	.
<i>Euonymus verrucosa</i>	.	.	1	.	.	.
<i>Fagus sylvatica</i> ssp. <i>moesiaca</i>	3	.	.	3	1	+
<i>Festuca gigantea</i>	.	.	.	+	.	.
<i>Fraxinus excelsior</i>	.	+	+	+	+	.
<i>Galium aparine</i>	.	+	.	.	.	+
<i>Galium rubioides</i>	.	.	+	.	.	.
<i>Galium mollugo</i>	.	.	.	.	+	.

Number in table	1	2	3	4	5	6
Galium sp.	.	.	.	.	+	.
Geranium robertianum	.	+	.	.	.	.
Geum urbanum	+	+	+	+	+	.
Glechoma hirsuta	.	.	+	+	.	.
Heracleum sibiricum	+	+	+	+	.	.
Hieracium sp.	.	.	.	.	+	.
Lamium purpureum	.	+	.	.	.	.
Lapsana communis	+	+	+	1	.	+
Lathraea squamaria	+	.	.	+	+	.
Ligustrum vulgare	.	+	+	.	.	.
Listera ovata	.	.	+	.	.	.
Orchis mascula	+	.	.	.	.	.
Orchis punctulata	+	.	.	.	.	.
Orchis purpurea	+	.	.	.	.	.
Platanthera chlorantha	+	+	.	.	+	+
Poa longifolia	+	.	.	.	.	+
Polygonatum odoratum	+	+	+	+	+	+
Populus tremula	.	+	.	.	1	+
Primula acaulis	1	+	+	+	+	.
Prunella vulgaris	.	.	.	.	+	.
Rosa sp.	+	+	.	.	.	.
Rubus sp.	.	+	+	1	.	.
Salix caprea	.	1	.	+	.	.
Sambucus ebulus	.	+	.	.	.	.
Smyrniium perfoliatum	.	.	+	.	.	.
Solidago virgaurea	+	.	.	.	.	.
Sorbus aucuparia	+	.	.	.	.	.
Stellaria media	.	.	.	.	.	.
Swida sanguinea ssp. australis	+	+	+	1	.	.
Taraxacum officinale	+	.	.	+	.	.
Ulmus minor	.	.	.	+	.	.
Urtica dioica	+	+	.	+	.	.
Veronica gentianoides	+	.	.	.	.	.
Viola mirabilis	.	.	+	.	.	.
Distribution of trees, shrubs and lianas by height						
> 5.0 m						
Acer campestre	.	3	4	.	.	.
Carpinus betulus	5	4	4	.	5	5
Cerasus avium	.	2	.	.	.	.
Corylus avellana	.	1	.	.	.	.
Fagus sylvatica ssp. moesiaca	3	.	.	3	1	.
Populus tremula	.	.	.	.	1	.
Quercus petraea	.	.	.	.	3	3
Salix caprea	.	1	.	+	.	.
Tilia cordata	.	2	.	.	1	2
0.5-5.0 m						
Carpinus betulus	.	.	.	.	+	+
Carpinus orientalis	.	+	.	.	.	.
Cerasus avium	.	.	+	.	.	.
Cornus mas	.	+	2	+	.	.
Corylus avellana	.	1	2	5	.	.
Crataegus curvisepala	+	+	+	.	.	.
Euonymus europaea	.	.	+	+	.	.
Euonymus verrucosa	.	.	1	.	.	.
Fagus sylvatica ssp. moesiaca	.	.	.	.	+	+
Ligustrum vulgare	.	+	+	.	.	.
Rosa sp.	.	+	.	.	.	.
Sambucus nigra	.	.	.	+	.	.
Swida sanguinea ssp. australis	.	+	.	1	.	.
Tilia cordata	.	.	+	.	+	+
Ulmus glabra	+	.	.	.	.	.
< 0.5 m						
Acer campestre	+	+	.	.	.	.
Carpinus betulus	.	.	+	.	+	.
Cornus mas	.	+	.	.	.	.
Corylus avellana	.	+	+	.	.	.
Crataegus curvisepala	.	+	.	.	.	.

Number in table	1	2	3	4	5	6
<i>Euonymus europaea</i>	.	+	+	+	.	.
<i>Fagus sylvatica</i> ssp. <i>moesiaca</i>	.	.	.	+	+	.
<i>Fraxinus excelsior</i>	.	+	+	+	+	.
<i>Ligustrum vulgare</i>	.	.	+	.	.	.
<i>Populus tremula</i>	.	+	.	.	+	+
<i>Quercus petraea</i>	+	+
<i>Rosa</i> sp.	+	+
<i>Rubus hirtus</i>	.	+	+	1	.	.
<i>Sambucus nigra</i>	.	+
<i>Sorbus aucuparia</i>	+
<i>Swida sanguinea</i> ssp. <i>australis</i>	+	+	+	.	.	.
<i>Tilia cordata</i>	.	.	+	+	.	+
<i>Ulmus glabra</i>	+
<i>Ulmus minor</i>	.	.	.	+	.	.
<i>Viburnum opulus</i>	.	.	+	+	.	.

1 – Onyshchenko V.A. (14.04.2005+20.06.2005), Crimea, Bakhchisarai District, northern slope of the Main Range near road Yalta – Sokolyne;

2 – Onyshchenko V.A. (15.04.2005+21.06.2005), Crimea, Simferopol District, terrace of a crook;

3 – Onyshchenko V.A. (15.04.2005+21.06.2005), Crimea, Simferopol District, terrace of the Salgir near Perevalne village;

4 – Onyshchenko V.A. (15.04.2005+21.06.2005), Crimea, Simferopol District, terrace of the Salgir near Perevalne village;

5 – Onyshchenko V.A. (15.04.2005+21.06.2005), Crimea, Simferopol District;

6 – Onyshchenko V.A. (15.04.2005+21.06.2005), Crimea, Simferopol District;

Table 64. *Lasero trilobi-Carpinetum* Didukh 1996

Number in table	1	2	3	4	5	6	7	8	9	10
Exposition	N	N	NW	SW	NW	SEE	NNE	S	SWW	
Inclination	3	10	15	15	5	5	12	10	10	
Altitude	400	500	550	500	400	500	550	600	550	700
Tree layer	80	75	90	70	80	85	70	85	60	“1.0”
Shrub layer	5	10	5	3	10	20	3	3	8	“0.2”
Herb layer in summer relevé	5	10	15	15	10	15	20	35	20	40
Herb layer in spring relevé	15	15	15	5	15	20	10	25	22	
Mosses	0	0	0	0	0	0	0	0	0	
Area (sq. m)										
Number of vascular plants species	29	38	24	41	36	33	35	19	37	44
Point number on Fig. 20	3	3	3	3	3	3	3	3	3	1
Nomenclatural type										*

Ch, D *Lasero trilobi-Carpinetum*

<i>Lasero trilobum</i>	.	+	.	+	.	.	.	.	.	+
<i>Lathyrus rotundifolius</i>	.	+	.	+	.	.	+	+	.	+
<i>Rosa canina</i>	+	+	+	.	+	.	.	.	+	.
<i>Scilla siberica</i>	2	1	1	.	+	2	1	.	1	.
<i>Vincetoxicum scandens</i>	.	+	+	+	+	+	+	.	+	+

Ch *Paeonio dauricae-Quercion*

<i>Allium cyrillii</i>	+	.	+	.	.	+	+	.	+	+
<i>Paeonia daurica</i>	+	+	+	+	+	+	+	+	+	+

Ch *Paeonio dauricae-Quercion* and *Dentario quinquefoliae-Fagion*

<i>Arum elongatum</i>	.	.	.	.	+	+	.	.	.	+
<i>Crocus tauricus</i>	+	+	.	+	1	1	1	1	1	.
<i>Galanthus plicatus</i>	.	.	.	.	.	+	+	1	1	.
<i>Lathyrus aureus</i>	.	+	+	+	.	+	+	+	+	+
<i>Physospermum cornubiense</i>	1	1	.	+	+	+	+	.	1	4
<i>Scilla bifolia</i>	+	+	+	+	1	1	1	2	1	.
<i>Viola dehnhardtii</i>	+	.	.	+	.	+	+	.	.	+

Ch *Fagetalia sylvaticae*

<i>Corydalis paczoskii</i> (<i>C. solida</i> s.l.)	.	.	.	.	.	.	.	+	.	.
<i>Galium odoratum</i>	+	1	.	.	.	1	1	.	+	.
<i>Dentaria quinquefolia</i> (reg.)	+	2	2	+	1	1	2	2	2	+
<i>Euphorbia amygdaloides</i>	.	+	.	+	.	+	+	.	+	.
<i>Ficaria verna</i>	.	.	.	.	.	+	.	+	.	.
<i>Mercurialis perennis</i>	.	2	3	+	.	2	1	2	3	+

Number in table	1	2	3	4	5	6	7	8	9	10
<i>Sanicula europaea</i>	.	+	.	.	.	.	.	.	.	+
<i>Viola reichenbachiana</i>	.	.	.	.	+	.	.	.	.	.
D Paeonio dauricae-Quercion versus Dentario quinquefoliae-Fagion										
<i>Carpinus betulus</i>	5	3	3	3	5	.	4	4	2	+
<i>Crataegus curvisepala</i>	+	+	+	+	+	+	+	.	+	.
<i>Hedera helix</i> s.l.	.	+	+	1	.	+	+	.	+	+
<i>Quercus petraea</i>	1	5	5	5	2	5	5	4	5	4
<i>Tamus communis</i>	.	.	+	.	.	+	.	.	.	.
<i>Viola odorata</i>	1	.	.	.	1	.	.	.	+	.
Ch, D Quercetalia pubescentis										
<i>Aegonychon purpureocaeruleum</i>	.	.	.	+	+	.	.	.	.	+
<i>Carex michelii</i>	+	.	.	+	.	.	.	.	.	.
<i>Carpinus orientalis</i>	.	.	.	.	+	.	.	.	.	.
<i>Clinopodium vulgare</i>	.	.	.	+	.	.	.	.	.	.
<i>Cornus mas</i>	1	2	1	1	+	2	+	1	2	4
<i>Dictamnus gymnostylis</i>	.	.	.	+	.	.	.	.	.	+
<i>Lathyrus niger</i>	+	+	+	+	+	.	+	.	+	+
<i>Ligustrum vulgare</i>	.	1	.	+	1	+	+	+	+	+
<i>Sorbus torminalis</i>	+	2	+	2	2	+	1	1	2	.
Other species										
<i>Acer campestre</i>	1	1	+	.	1	2	1	3	1	5
<i>Brachypodium sylvaticum</i>	.	.	.	.	+	.	.	.	.	+
<i>Campanula trachelium</i>	.	.	.	.	.	.	.	.	.	+
<i>Carex spicata</i>	.	+	.	.	.	.	.	.	.	.
<i>Carex cuspidata</i>	.	.	.	+	.	.	.	.	.	.
<i>Carex digitata</i>	+	+	.	.	.	.	.	.	.	+
<i>Cephalanthera rubra</i>	.	.	.	+	.	.	+	.	.	.
<i>Cerasus avium</i>	+	.	.	.	+	1	+	.	+	.
<i>Clematis vitalba</i>	.	.	.	.	.	.	.	.	.	+
<i>Convallaria majalis</i>	.	.	.	.	.	.	.	.	.	+
<i>Corylus avellana</i>	+	.	.	.	2	2	.	.	.	.
<i>Dactylis glomerata</i>	.	+	.	.	.	.	.	.	.	.
<i>Epipactis helleborine</i>	.	+	+	.	+	.	+	.	+	+
<i>Epipactis microphylla</i>	.	+	.	.	.	.	.	.	.	.
<i>Euonymus europaea</i>	+	1	+	+	1	1	+	+	+	+
<i>Euonymus latifolia</i>	.	.	.	.	.	.	.	.	.	+
<i>Euonymus verrucosa</i>	+	1	.	+	1	+	+	.	+	+
<i>Fagus sylvatica</i> ssp. <i>moesiaca</i>	+	.	+	.	+	.	.	.	+	.
<i>Fragaria vesca</i>	.	.	.	+	.	.	.	.	+	.
<i>Fraxinus excelsior</i>	+	+	.	+	+	2	+	+	+	4
<i>Galium aparine</i>	.	+	.	.	.	.	.	.	+	+
<i>Geum urbanum</i>	+	.	.	+	+	.	.	.	.	+
<i>Heracleum sibiricum</i>	.	.	.	.	.	.	.	.	.	+
<i>Lamium purpureum</i>	.	+	.	.	.	.	.	.	.	.
<i>Lapsana communis</i>	.	.	.	.	.	.	.	.	.	+
<i>Lathyrus laxiflorus</i>	.	.	.	.	.	.	.	.	.	+
<i>Luzula forsteri</i>	.	.	.	+	.	.	.	.	.	.
<i>Neottia nidus-avis</i>	.	+	.	.	+	.	.	.	.	.
<i>Orchis mascula</i>	.	.	.	.	.	.	.	.	.	+
<i>Ornithogalum fimbriatum</i>	.	.	.	.	+	.	.	.	.	.
<i>Ornithogalum ponticum</i>	.	.	.	.	.	+	.	.	.	+
<i>Platanthera chlorantha</i>	.	.	.	.	.	.	+	.	.	+
<i>Poa nemoralis</i>	.	+	.	.	.	.	.	.	.	+
<i>Polygonatum hirtum</i>	.	+	+	+	1	+	+	.	+	.
<i>Polygonatum odoratum</i>	.	.	+	+	.	.	.	.	1	+
<i>Primula acaulis</i>	+	.	.	+	2	.	+	+	1	.
<i>Primula veris</i>	.	+	.	.	.	.	.	.	.	.
<i>Prunus stepposa</i>	.	.	.	.	.	.	.	.	+	.
<i>Pyrethrum corymbosum</i>	.	.	.	.	.	.	.	.	.	+
<i>Pyrus communis</i>	.	.	.	.	2	1	.	.	.	.
<i>Rosa corymbifera</i>	.	.	.	+	.	.	.	.	.	.
<i>Rosa</i> sp.	.	.	.	+	.	.	.	.	.	.
<i>Swida sanguinea</i> ssp. <i>australis</i>	+	.	.	+	.	.	.	.	.	.
<i>Torilis japonica</i>	.	.	.	.	.	+	.	.	.	.
<i>Ulmus minor</i>	.	.	+	+	+	.	+	.	+	.
<i>Veronica officinalis</i>	.	.	.	+	.	.	+	.	.	.
<i>Vicia cassubica</i>	.	.	.	+	.	.	.	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10
<i>Viola hirta</i>	.	.	.	.	.	.	.	.	.	+
<i>Viola odorata</i>	.	.	.	.	.	.	.	.	.	+
Distribution of trees, shrubs and lianas by height										
> 5.0 m										
<i>Acer campestre</i>	.	.	.	.	.	1	1	3	.	-
<i>Carpinus betulus</i>	5	3	3	3	5	.	3	4	2	-
<i>Fraxinus excelsior</i>	.	.	.	.	.	2	.	.	.	-
<i>Pyrus communis</i>	.	.	.	.	2	1	.	.	.	-
<i>Quercus petraea</i>	1	5	5	5	2	5	5	4	5	-
<i>Sorbus torminalis</i>	.	2	.	2	2	+	1	1	2	-
0.5-5.0 m										
<i>Acer campestre</i>	+	.	.	.	1	+	+	1	1	-
<i>Carpinus betulus</i>	1	+	1	1	1	.	1	1	.	-
<i>Carpinus orientalis</i>	.	.	.	.	+	.	.	.	.	-
<i>Cerasus avium</i>	.	.	.	.	.	1	+	.	+	-
<i>Cornus mas</i>	1	2	1	1	+	2	+	1	2	-
<i>Corylus avellana</i>	+	.	.	.	2	2	.	.	.	-
<i>Crataegus curvisepala</i>	.	+	+	+	.	+	+	.	+	-
<i>Euonymus europaea</i>	.	1	+	+	1	1	+	.	+	-
<i>Euonymus verrucosa</i>	+	.	.	+	1	+	+	.	+	-
<i>Fagus sylvatica</i> ssp. <i>moesiaca</i>	.	.	.	.	+	.	.	.	+	-
<i>Fraxinus excelsior</i>	+	.	.	+	.	.	.	.	.	-
<i>Hedera helix</i>	.	.	.	.	.	+	+	.	+	-
<i>Ligustrum vulgare</i>	.	+	.	.	+	+	.	.	+	-
<i>Prunus stepposa</i>	.	.	.	.	.	.	.	.	+	-
<i>Quercus petraea</i>	+	+	.	+	.	.	.	.	+	-
<i>Rosa canina</i>	+	.	.	.	.	.	.	.	+	-
<i>Sorbus torminalis</i>	+	+	+	+	.	.	.	.	+	-
<i>Swida sanguinea</i> ssp. <i>australis</i>	.	.	.	+	.	.	.	.	.	-
<i>Ulmus minor</i>	.	.	+	+	.	.	+	.	+	-
< 0.5 m										
<i>Acer campestre</i>	1	1	+	.	+	1	+	+	+	-
<i>Carpinus betulus</i>	1	+	1	+	+	.	2	+	+	-
<i>Carpinus orientalis</i>	.	.	.	.	+	.	.	.	.	-
<i>Cerasus avium</i>	+	.	.	.	+	+	+	.	+	-
<i>Cornus mas</i>	.	.	.	+	.	.	+	.	.	-
<i>Corylus avellana</i>	.	.	.	.	+	+	.	.	.	-
<i>Crataegus curvisepala</i>	+	+	+	+	+	.	+	.	.	-
<i>Euonymus europaea</i>	+	.	.	+	+	1	+	+	.	-
<i>Euonymus verrucosa</i>	+	1	.	.	.	+	.	.	+	-
<i>Fagus sylvatica</i> ssp. <i>moesiaca</i>	+	.	+	.	.	.	.	.	.	-
<i>Fraxinus excelsior</i>	+	+	.	+	+	.	+	+	+	-
<i>Hedera helix</i>	.	+	+	1	.	+	+	.	+	-
<i>Ligustrum vulgare</i>	.	1	.	+	1	+	+	+	+	-
<i>Quercus petraea</i>	+	+	+	.	.	.	.	+	+	-
<i>Rosa canina</i>	.	+	+	.	+	.	.	.	.	-
<i>Rosa corymbifera</i>	.	.	.	+	.	.	.	.	.	-
<i>Rosa</i> sp.	.	.	.	+	.	.	.	.	.	-
<i>Sorbus torminalis</i>	+	+	+	+	+	.	+	.	+	-
<i>Swida sanguinea</i> ssp. <i>australis</i>	+	.	.	.	.	.	.	.	.	-
<i>Tamus communis</i>	.	.	+	.	.	+	.	.	.	-
<i>Ulmus minor</i>	.	.	.	+	+	.	.	.	+	-

1 – Onyshchenko V.A. (16.04.2007+05.07.2007), Crimea, Kirovske District, south of Saryi Krym town;

2 – Onyshchenko V.A. (16.04.2007+05.07.2007), Crimea, Kirovske District, south of Saryi Krym town;

3 – Onyshchenko V.A. (16.04.2007+05.07.2007), Crimea, Kirovske District, south of Saryi Krym town;

4 – Onyshchenko V.A. (16.04.2007+05.07.2007), Crimea, Kirovske District, south of Saryi Krym town;

5 – Karpenko Yu.O. (16.04.2007) + Onyshchenko V.A. (05.07.2007), Crimea, Kirovske District, south of Saryi Krym town;

6 – Karpenko Yu.O. (16.04.2007) + Onyshchenko V.A. (05.07.2007), Crimea, Kirovske District, south of Saryi Krym town;

7 – Karpenko Yu.O. (16.04.2007) + Onyshchenko V.A. (05.07.2007), Crimea, Kirovske District, south of Saryi Krym town;

8 – Karpenko Yu.O. (16.04.2007) + Onyshchenko V.A. (05.07.2007), Crimea, Kirovske District, south of Saryi Krym town;

9 – Karpenko Yu.O. (16.04.2007) + Onyshchenko V.A. (05.07.2007), Crimea, Kirovske District, south of Saryi Krym town;

10 – Didukh Ya.P. (11.06.1975), Yaltynsky Nature Reserve, Hurzufske forestry, near Krasnokamianka village (Didukh 1996: tab. 3, rel. 36).

Table 65. Fago-Aceretum stevenii Borhidi 1962

Number in table	1	2	3	4	5
Tree layer	“0.9”	“1.0”	“0.8”	“1.0”	“1.0”
Shrub layer	0	0	0	0	30
Herb layer	70	60	80	40	5
Altitude	900	1100	800	1100	1000
Number of vascular plants species	21	16	20	10	24

Ch Fago-Aceretum stevenii

Acer stevenii

5	5	5	5	5
---	---	---	---	---

Ch Paeonio dauricae-Quercetum

Allium cyrillii

.	.	.	.	+
---	---	---	---	---

Paeonia daurica

+
---	---	---	---	---

**Ch Paeonio dauricae-Quercion
and Dentario quinquefoliae-
Fagion**

Arum elongatum

+	.	+	.	+
---	---	---	---	---

Galanthus plicatus

+	3	.	3	.
---	---	---	---	---

Physospermum cornubiense

+	.	.	.	4
---	---	---	---	---

Scilla bifolia

+	+	.	.	+
---	---	---	---	---

Ch Fagetalia sylvaticae

Corydalis marschalliana (reg.)

+	+	+	+	.
---	---	---	---	---

Dentaria quinquefolia (reg.)

+	+	+	3	+
---	---	---	---	---

Dryopteris filix-mas

3	+	5	.	+
---	---	---	---	---

Euphorbia amygdaloides

.	.	+	.	.
---	---	---	---	---

Fagus sylvatica ssp. moesiaca

+	.	+	4	.
---	---	---	---	---

Ficaria verna

+	.	+	.	.
---	---	---	---	---

Galium odoratum

+	.	+	+	.
---	---	---	---	---

Mercurialis perennis

4	5	4	1	+
---	---	---	---	---

Pulmonaria obscura

+
---	---	---	---	---

Other species

Alliaria petiolata

+	.	+	.	.
---	---	---	---	---

Anthriscus sylvestris

.	+	+	.	+
---	---	---	---	---

Bromopsis benekenii

.	+	.	.	.
---	---	---	---	---

Carex digitata

.	.	.	.	+
---	---	---	---	---

Carpinus betulus

+	5	+	+	5
---	---	---	---	---

Cornus mas

.	.	.	.	4
---	---	---	---	---

Crataegus curvisepala

.	.	.	.	+
---	---	---	---	---

Dactylis glomerata

+	.	.	.	+
---	---	---	---	---

Dictamnus gymnostylis

.	.	.	.	+
---	---	---	---	---

Fraxinus excelsior

+	+	+	+	+
---	---	---	---	---

Galium aparine

.	.	+	.	.
---	---	---	---	---

Geum urbanum

.	.	+	.	.
---	---	---	---	---

Hesperis matronalis

.	.	+	.	.
---	---	---	---	---

Lamium purpureum

+	+	+	.	.
---	---	---	---	---

Lapsana communis

.	.	.	.	+
---	---	---	---	---

Laser trilobum

.	.	.	.	+
---	---	---	---	---

Ligustrum vulgare

.	.	.	.	+
---	---	---	---	---

Poa nemoralis

.	.	.	.	+
---	---	---	---	---

Polygonatum odoratum

.	+	.	+	.
---	---	---	---	---

Primula acaulis

+	+	.	.	+
---	---	---	---	---

Quercus petraea

.	.	.	.	+
---	---	---	---	---

Ranunculus constantinopolitanus

+	+	.	.	.
---	---	---	---	---

Urtica dioica

.	.	+	.	.
---	---	---	---	---

Vincetoxicum scandens

.	.	.	.	+
---	---	---	---	---

Viola odorata

.	+	+	.	+
---	---	---	---	---

Source of data: Didukh 1996: tab. 3 , rel. 26-30.

A.8. *Tilio platyphylli-Acerion pseudoplatani*

Table 66. Arunco-Aceretum Moor 1952 s. l.

Number in table	1	2	3
Exposition			NW
Tree layer	80	80	90
Shrub layer	0	0	10
Herb layer	80	75	40
Number of species of vascular plants	24	23	29
Point number on Fig. 22	1	1	2

D Arunco-Aceretum

<i>Abies alba</i>	+	+	1
<i>Filipendula ulmaria</i>	+	+	.
<i>Polystichum braunii</i>	.	+	+
<i>Senecio ovatus</i>	2	1	.
<i>Symphytum cordatum</i>	+	.	+

Ch Tilio-Acerion

<i>Acer pseudoplatanus</i>	5	5	5
<i>Aruncus dioicus</i>	.	.	1
<i>Geranium phaeum</i>	.	.	+
<i>Lunaria rediviva</i>	+	+	.

Ch Fagetalia sylvaticae

<i>Actaea spicata</i>	.	.	+
<i>Carex pilosa</i>	.	.	1
<i>Carex sylvatica</i>	.	.	+
<i>Daphne mezereum</i>	+	.	.
<i>Dryopteris filix-mas</i>	+	1	+
<i>Euphorbia amygdaloides</i>	.	.	+
<i>Fagus sylvatica</i>	2	2	.
<i>Galium odoratum</i>	1	.	.
<i>Impatiens noli-tangere</i>	3	4	.
<i>Mercurialis perennis</i>	.	.	1
<i>Milium effusum</i>	1	+	+
<i>Paris quadrifolia</i>	+	+	1
<i>Pulmonaria obscura</i>	.	.	1

Ch Quercu-Fageta

<i>Aegopodium podagraria</i>	.	+	.
<i>Anemone nemorosa</i>	.	.	+
<i>Fraxinus excelsior</i>	.	.	4

Other species

<i>Aconitum</i> sp.	+	.	.
<i>Alnus incana</i>	.	.	+
<i>Athyrium filix-femina</i>	2	1	1
<i>Calamagrostis villosa</i>	+	.	.
<i>Cicerbita alpina</i>	.	+	.
<i>Dryopteris carthusiana</i>	.	+	.
<i>Equisetum hyemale</i>	.	.	2
<i>Gentiana asclepiadea</i>	.	.	+
<i>Glechoma hirsuta</i>	1	1	.
<i>Hylotelephium argutum</i>	+	.	.
<i>Lamium purpureum</i>	+	2	.
<i>Majanthemum bifolium</i>	.	.	+
<i>Oreopteris limbosperma</i>	.	+	.
<i>Oxalis acetosella</i>	.	+	+
<i>Phegopteris connectilis</i>	+	.	.
<i>Phyteuma spicatum</i>	.	.	+
<i>Picea abies</i>	+	.	.
<i>Polygonatum verticillatum</i>	.	.	+
<i>Polypodium vulgare</i>	.	.	+
<i>Ribes</i> sp.	.	+	.
<i>Rubus hirtus</i>	5	.	1
<i>Rubus idaeus</i>	+	.	.
<i>Stellaria holostea</i>	.	.	1

Number in table	1	2	3
<i>Stellaria nemorum</i>	1	+	.
<i>Urtica dioica</i>	.	+	.
<i>Veratrum lobelianum</i>	.	+	.
<i>Vinca minor</i>	.	.	4

1 – Skolivski Beskydy National Nature Park (Slomakha et al. 2004: tab. 3.26, rel. 5);

2 – Skolivski Beskydy National Nature Park (Slomakha et al. 2004: tab. 3.26, rel. 6);

3 – Chorney I.I., Drobit N.A. (22.07.2004), Vyzhnutsky National Nature Park (Chorney et al. 2005: tab. 5.2.15, rel. 3).

Table 67. Phyllitido-Aceretum Moor 1952 s.l.

Number in table	1	2	3
Tree layer			70
Shrub layer			20
Herb layer			60
Area (sq. m)	150	100	
Number of vascular plants species	20	25	30
Point number of point on Fig. 23	1	1	2

Ch, D Phyllitido-Aceretum

<i>Cystopteris fragilis</i>	+	+	.
<i>Phyllitis scolopendrium</i>	3	4	1
<i>Polystichum aculeatum</i>	+	+	.

Ch Tilio-Acerion

<i>Acer pseudoplatanus</i>	4	5	2
<i>Arum maculatum</i>	.	+	.
<i>Lunaria rediviva</i>	.	.	1

Ch Fagetalia sylvaticae

<i>Actaea spicata</i>	+	+	+
<i>Anemone ranunculoides</i>	–	+	–
<i>Asarum europaeum</i>	.	+	.
<i>Corydalis solida</i>	–	+	–
<i>Daphne mezereum</i>	.	.	+
<i>Dentaria bulbifera</i>	+	.	.
<i>Dentaria glandulosa</i>	2	1	1
<i>Dryopteris filix-mas</i>	+	.	1
<i>Fagus sylvatica</i>	1	+	3
<i>Lamium galeobdolon</i>	4	.	1
<i>Mercurialis perennis</i>	+	.	.
<i>Paris quadrifolia</i>	+	.	1
<i>Pulmonaria obscura</i>	1	.	.
<i>Ranunculus lanuginosus</i>	.	+	.
<i>Salvia glutinosa</i>	+	.	.
<i>Symphytum cordatum</i>	+	1	.
<i>Ulmus glabra</i>	.	.	1

Other species

<i>Abies alba</i>	.	.	2
<i>Acer platanoides</i>	.	.	1
<i>Anemone nemorosa</i>	2	3	.
<i>Asplenium trichomanes</i>	2	+	.
<i>Asplenium viride</i>	.	+	.
<i>Athyrium filix-femina</i>	.	+	+
<i>Carpinus betulus</i>	+	+	5
<i>Cerasus avium</i>	1	.	.
<i>Convallaria majalis</i>	.	+	.
<i>Corylus avellana</i>	.	+	.
<i>Dryopteris carthusiana</i>	.	.	1
<i>Dryopteris dilatata</i>	.	.	+
<i>Fragaria vesca</i>	.	+	.
<i>Gagea spathacea</i>	.	+	.
<i>Geranium robertianum</i>	.	.	+

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Arctium nemorosum	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Artemisia absinthium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Asplenium trichomanes	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+
Betula pendula	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cardaminopsis arenosa	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
Chaerophyllum aromaticum	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Chrysosplenium alternifolium	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
Cirsium arvense	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Cystopteris fragilis	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	+	+
Elymus caninus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.
Euphorbia cyparissias	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Fallopia dumetorum	.	.	.	+	+	.	.	.	.	.	+	.	+	.	+	.	.	+	.	.	.	.	.	+	+
Galanthus nivalis	+	+	1	1	1	1	+	.	.	2	1	.	+	1	+	1	+	1	2	+	.	1	+	1	+
Galeopsis pubescens	.	.	.	+	.	.	.	.	+	.	+	.	+	+	.	+	.	.	.	.	.	.	.	.	+
Galium aparine	+	.	.	1	2	2	+	.	+	+	+	+	+	+	.	+	+	+	1	+	1	.	+	+	+
Galium intermedium	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Geranium robertianum	+	+	.	.	+	+	+	+	1	.	1	.	+	+	1	+	+	+	+	+	+	.	1	+	+
Geum urbanum	.	+	+	+	+	.	+	.	1	+	+	+	+	+	+	+	+	+	+	+	+	.	.	.	+
Glechoma hirsuta	+	.	1	+	1	+	.	.	.	+	+	+	2	1	.	+	3	.	+	+	1	.	.	.	.
Hedera helix	.	+	.	+	+	.	.	+	.	.	.	+	+	+	+	.	.	.	.	.	.	.	.	.	+
Humulus lupulus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Hypericum hirsutum	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
Iris graminea	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lapsana communis	.	+	+	.	.	.	.	.	+	.	+	.	+	+	.	+	+	.	.	.	.	.	.	.	.
Lathyrus niger	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.
Leonurus villosus	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Lonicera xylosteum	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Malus sylvestris	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Melica altissima	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Melica picta	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	1	.
Melica uniflora	.	.	.	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.
Moehringia trinervia	.	+	.	.	.	.	.	.	.	.	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.
Mycelis muralis	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	+	.	.	.	.	.	.	.	.	.
Omphalodes scorpioides	1	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
Polypodium vulgare	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.
Quercus robur	.	1	1	.	.	.	.	.	1	+	2	1	.	.	.	.	.	.	.	1	2	.	.	.	.
Robinia pseudoacacia	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Rosa corymbifera	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
Rubus caesius	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.
Sambucus nigra	+	1	+	1	+	+	+	1	1	.	+	1	+	.	+	+	.	1	+	+	1	2	1	1	1
Scopolia carniolica	.	+	.	.	.	.	.	5	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Swida sanguinea	.	.	.	.	+	.	.	+	+	.	+	.	.	+	+	+	+	.	.	.	.	+	.	+	.
Taraxacum officinale	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.
Tilia cordata	2	3	.	.	2	2	.	2	.	2	1	4	.	.	.	.	.	.	1	.	2	.	2	.	.
Torilis japonica	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Ulmus minor	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Urtica dioica	1	+	2	4	+	+	2	+	+	.	+	.	1	+	2	+	+	+	+	.	.	.	1	+	2
Veronica chamaedrys	.	.	.	+	.	.	.	.	.	+	.	.	.	+	+	+	+	.	+	.	.	.	.	.	.
Viburnum opulus	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
Vincetoxicum hirundinaria	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.
Viola hirta	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Distribution of trees, shrubs and lianas by height																									
>0,5 m																									
Acer campestre	1	.	.	.	+	2	.	.	.	+	1	1	2	.	2	.	.	.	1	3	1	.	.	.	2
Acer platanoides	2	1	2	1	3	4	2	4	1	3	1	4	3	4	2	4	3	1	2	2	4	4	3	4	3
Acer pseudoplatanus	1	2	.	.	.	.	2	2	1	+	2	1	.	.	.	1	3	1	.	.	.	.	.	1	1
Betula pendula	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Carpinus betulus	3	1	3	.	+	2	3	.	1	4	3	2	+	1	.	.	3	1	4	+	.	.	.	2	
Cerasus avium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.
Corylus avellana	.	.	.	.	1	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Euonymus europaea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.
Fagus sylvatica	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Fraxinus excelsior	3	4	4	4	5	4	4	4	5	5	4	4	5	5	5	4	4	5	4	4	5	4	4	5	4
Quercus robur	.	1	1	.	.	.	.	.	1	+	2	1	.	.	.	.	.	.	1	2	.	.	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		
<i>Tilia cordata</i>	2	2	.	.	2	2	.	2	.	2	1	4	.	.	.	.	.	.	1	.	2	.	2	.	.	
<i>Ulmus glabra</i>	.	1	1	.	2	2	.	.	1	.	1	.	2	.	2	2	+	1	.	1	1	4	1	.	.		
0.5-5.0 m																											
<i>Acer campestre</i>	.	.	.	.	+	+	+	.	.	.	.	.	+	1	2	2	.	.	.	1	1	.	.	.	.	.
<i>Acer platanoides</i>	+	.	.	.	+	+	+	+	+	.	+	+	.	1	.	1	2	.	.	.	1	.	.	+	.	.	
<i>Acer pseudoplatanus</i>	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.
<i>Carpinus betulus</i>	+	.	.	.	+	.	.	.	.	.	.	.	+	1	.	.	+	+	.	.	+	.	.	.	.	.
<i>Corylus avellana</i>	+	1	+	1	.	.	.	+	+	.	1	1	+	.	+	1	1	2	.	+	2	3	2	1	3		
<i>Crataegus curvisepala</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
<i>Euonymus europaea</i>	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	3	.	.	.	.
<i>Euonymus verrucosa</i>	.	.	.	.	+	+	.	.	.	.	.	.	+	.	1	+	.	+	.	+	+	.	.	+	.	.
<i>Fraxinus excelsior</i>	.	.	+	.	+	.	+	+	+	+	1	.	.	.	.	.	+	+	.	+	.	.	+	.	.	.
<i>Malus sylvestris</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.
<i>Robinia pseudoacacia</i>	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Sambucus nigra</i>	+	1	+	1	+	+	+	1	1	.	+	1	+	.	+	.	.	1	+	+	1	+	1	1	1		
<i>Swida sanguinea</i>	.	.	.	.	+	.	.	+	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.	+	+	.
<i>Tilia cordata</i>	+	1	.	.	+	.	.	.	.	+	.	+	.	.	.	.	.	.	.	+	.	.	.	.	.	.
<i>Ulmus campestris</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.
<i>Ulmus glabra</i>	.	1	+	1	.	+	+	1	+	.	+	1	.	+	2	+	1	1	+	+	2	.	1	+	.		
<i>Viburnum lantana</i>	.	.	.	1	.	.	.	.	.	.	.	.	.	+	+	+	+	.	.	.	+	.	.	+	.	.
< 0.5 m																											
<i>Acer campestre</i>	+	.	.	.	.	+	.	.	.	+	+	+	+	1	.	+	.	+	.	+	+	.	.	.	.	+
<i>Acer platanoides</i>	+	+	.	+	+	+	+	+	+	+	+	+	+	1	+	+	+	+	1	+	+	+	+	+	+	.	
<i>Acer pseudoplatanus</i>	.	.	.	.	.	.	+	+	+	+	+	+	+	.	.	.	+	+	+	+	+	.	.	.	+	.
<i>Carpinus betulus</i>	.	.	.	.	.	.	.	.	.	+	+	+	+	.	.	.	.	+	.	.	.	.	.	.	.	.
<i>Cerasus avium</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	+	.	.	.	.	.	.	.	.
<i>Corylus avellana</i>	.	+	.	.	.	.	.	+	+	.	+	+	.	.	.	.	.	.	.	.	.	+	.	.	.	.
<i>Crataegus curvisepala</i>	.	.	.	.	.	.	.	+	+	.	.	.	+	+	.	+	.	.	.	.	.	.	.	.	.	.
<i>Daphne mezereum</i>	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Euonymus europaea</i>	+	+	+	+	.	+	.	+	+	.	+	.	.	.	+	+	+	+	+	+	+	+	+	.	.	.	
<i>Euonymus verrucosa</i>	+	+	.	+	+	+	.	.	+	+	+	+	+	+	+	+	.	+	+	+	+	+	+	+	+	.	
<i>Fagus sylvatica</i>	.	+
<i>Fraxinus excelsior</i>	+	+	.	+	+	+	+	+	+	+	+	+	+	.	.	.	.	+	+	+	.	.	.	.	.	.
<i>Hedera helix</i>	.	+	.	+	+	.	.	+	.	.	.	.	+	+	+	.	.	.	.	.	.	.	.	.	+	.
<i>Lonicera xylosteum</i>	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Quercus robur</i>	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Rosa corymbifera</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Rubus caesius</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.
<i>Sambucus nigra</i>	.	.	.	.	.	.	.	.	+	.	+	.	+	.	+	.	+	.	.	.	+	2	.	+	+	.
<i>Swida sanguinea</i>	.	.	.	.	+	.	.	.	.	.	+	.	.	+	+	+	+	.	.	.	+	.	.	.	.	.
<i>Tilia cordata</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Ulmus campestris</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.
<i>Ulmus glabra</i>	.	+	.	+	.	+	+	.	+	+	+	+	+	+	+	+	+	.	+	+	+	+	.	+	.		
<i>Viburnum lantana</i>	.	.	.	.	+	+	.	.	.	+	.	+	+	+	+	+	+	.	+	+	.	.	.	.	.	.
<i>Viburnum opulus</i>	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Syntaxa: 1 – *Aceri platanoidis-Fraxinetum typicum*, 2 – *Aceri platanoidis-Fraxinetum bromopsietosum benekenii*, 3 – *Aceri platanoidis-Fraxinetum lunarietosum*.

Location: Ternopil Region, Husiatyn District, Medobory Nature Reserve.

- 1 – Onyshchenko V.A. (04.05.1996), Krasiainske forestry, sq. 41, top of Yantseva hill;
- 2 – Onyshchenko V.A. (07.1996+04.1996), Horodnytske forestry, sq. 26, north-west slope of Sokolykha hill;
- 3 – Andrienko T.L. (06.07.1996) + Onyshchenko V.A. (04.1997), Horodnytske forestry, sq. 26, top of Sokolykha hill;
- 4 – Onyshchenko V.A. (18.04.1997+20.06.1997), Horodnytske forestry, sq. 33, top of Sokolykha hill;
- 5 – Onyshchenko V.A. (19.04.1997+11.06.1997), Krasiainske forestry, sq. 56, Antkova hill;
- 6 – Onyshchenko V.A. (19.04.1997+11.06.1997), Krasiainske forestry, sq. 56, Antkova hill;
- 7 – Onyshchenko V.A. (19.04.1997+11.06.1997), Krasiainske forestry, sq. 56, Antkova hill;
- 8 – Onyshchenko V.A. (04.1997+20.06.1997), Horodnytske forestry, sq. 34, slope near the Zbruch floodplain;
- 9 – Onyshchenko V.A. (25.04.1997+12.08.1997), Viknianske forestry, sq. 8;
- 10 – Onyshchenko V.A. (04.1997) + Onyshchenko V.A., Panchenko S.M. (05.09.1997), Horodnytske forestry, sq. 26;
- 11 – Onyshchenko V.A. (04.1997) + Onyshchenko V.A., Panchenko S.M. (05.09.1997), Horodnytske forestry, sq. 27;
- 12 – Onyshchenko V.A. (20.04.1997+14.06.1997), Horodnytske forestry, sq. 39, slope to the Zbruch floodplain;
- 13 – Onyshchenko V.A. (04.1997) + Onyshchenko V.A., Panchenko S.M. (04.09.1997), Horodnytske forestry, sq. 38, Vysoky Kamin hill;
- 14 – Onyshchenko V.A. (28.04.1997+05.09.1997), Horodnytske forestry, sq. 38, Vysoky Kamin hill;
- 15 – Onyshchenko V.A. (22.04.1997) + Onyshchenko V.A., Panchenko S.M. (04.09.1997), Horodnytske forestry, sq. 38, Vysoky Kamin hill;
- 16 – Onyshchenko V.A. (18.04.1997+14.06.1997), Horodnytske forestry, sq. 38, Kruhla Hirka hill;
- 17 – Onyshchenko V.A. (18.04.1997+14.06.1997), Horodnytske forestry, sq. 38, Kruhla Hirka hill;

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Carpinus betulus	2	1	1	1	2	1	1	1	2	2	3	2	2	2	.	1	2	2	2	1	3	.	.	.	
Cerasus avium	1	.	1	.	.	.	.	1	1	1	.	1	.	.	.	.	.	2	.	.	.	.	.	.
Fagus sylvatica	2	.	.	.	.	2	.	.	.	.	.	.	.	.	.	2	1	.	2	2	2	.	.	.
Fraxinus excelsior	4	4	4	4	4	3	4	3	3	4	4	3	4	4	4	4	4	4	3	3	4	3	3	5	
Picea abies	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	2	.	.	.	.	.	.	.
Pinus sylvestris	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Populus tremula	.	.	1	.	.	.	.	.	.	.	.	2	.	.	2	.	.	.	.	.	.	.	.	.
Quercus robur	1	2	1	2	.	2	2	1	2	.	.	1	.	2	.	.	2	3	3	2	.	.	.	.
Salix caprea	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.
Tilia cordata	2	1	2	1	2	2	2	1	2	2	2	2	1	2	.	2	2	2	.	2	2	.	.	.	
Ulmus glabra	2	2	.	1	2	2	.	2	2	2	2	2	2	1	.	2	2	2	2	1	.	1	2	.	
Ulmus minor	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
0.5-5.0 m																									
Acer campestre	.	.	.	.	.	.	.	.	.	+	.	.	.	.	1	.	.	.	.	.	.	.	.	+
Acer platanoides	1	1	+	+	+	+	+	+	1	1	+	+	+	1	.	1	1	+	1	1	1	.	.	.	
Acer pseudoplatanus	1	1	1	1	1	1	+	1	1	1	1	1	1	1	1	1	1	1	1	1	1	.	.	.	
Alnus glutinosa	.	.	.	.	.	.	1	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.
Carpinus betulus	+	+	.	+	.	+	.	+	+	+	+	+	.	+	.	+	1	.	.	+	1	.	.	.	
Cerasus avium	+	.	.	.	.	+	.	.	+	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Corylus avellana	+	1	1	+	.	+	.	+	+	1	.	+	+	+	.	1	2	.	.	1	.	.	+	+	
Crataegus curvisepala	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Daphne mezereum	+	+	+	+	+	+	.	+	+	+	+	.	+	.	.	1	.	.	.	+	.	.	.	.
Euonymus europaea	+	1	1	+	+	+	.	1	+	+	+	+	+	.	1	1	.	.	.	.	.	.	.	.
Euonymus verrucosa	+	1	+	+	+	+	.	+	+	+	+	+	+	.	.	.	.	.	.	+	.	.	.	.
Fagus sylvatica	+	.	.	.	+	+	.	+	+	.	.	.	.	1	1	1	1	.	1	1	1	.	.	.
Fraxinus excelsior	+	+	1	+	+	+	+	+	+	+	+	+	+	+	.	+	+	+	.	+	+	.	.	.	
Lonicera xylosteum	.	.	.	+	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	+
Padus avium	+	+	+	+	.	+	.	+	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Picea abies	+	+	.	.	.	.	.	.	+	.	.	+	+	+	.	.	1	.	.	.	.	.	.	.
Rosa dumalis	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Rubus caesius	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.
Rubus hirtus	.	.	+	.	.	.	.	+	.	.	.	1	1	1	.	1	.	.	.	.	.	.	.	.
Rubus idaeus	.	+	.	.	.	.	+	.	.	.	.	+	+	+	.	1	.	.	.	.	.	.	.	.
Salix caprea	+	+	+	.	.	.	.	+	.	1	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Sambucus nigra	1	1	1	1	1	1	.	1	1	1	+	+	+	+	2	1	2	1	1	1	1	+	+	+	
Sorbus aucuparia	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.
Swida sanguinea	+	+	+	+	.	+	.	+	+	+	.	.	.	.	.	1	.	1	.	.	.	.	.	.
Tilia cordata	+	+	+	+	+	+	+	+	+	+	.	+	+	.	.	.	.	.	+	1	.	.	+	.
Ulmus glabra	1	1	1	1	1	1	+	1	1	1	1	1	+	+	+	1	1	+	1	1	1	.	+	+	
< 0.5 m																									
Acer campestre	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Acer platanoides	1	1	+	+	+	+	.	+	+	+	+	+	+	+	.	+	+	+	+	+	+	.	+	.	
Acer pseudoplatanus	1	1	1	+	1	1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	.	.	.	
Carpinus betulus	.	.	.	.	.	.	.	.	+	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.
Corylus avellana	+	+	+	+	.	.	.	+	.	+	.	.	+	+	.	+	.	.	.	.	.	.	.	+
Crataegus curvisepala	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Daphne mezereum	+	.	+	.	.	+	.	.	+	+	.	.	.	.	.	+	.	.	.	.	.	.	.	+
Euonymus europaea	+	1	1	+	+	1	+	+	+	+	+	+	+	.	1	+	.	.	.	+	+	.	+	+	
Euonymus verrucosa	+	+	+	+	+	+	.	+	+	+	+	+	+	.	.	.	.	.	.	+	+	.	.	.
Fagus sylvatica	.	.	.	.	.	.	.	.	.	+	.	.	.	.	+	+	.	.	+	+	.	.	.	.
Fraxinus excelsior	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	.	.	.	
Hedera helix	1	.	.	.	.	+	.	.	3	.	2	.	.	.	.	.	.	.	2	4	.	.	.	.
Malus sylvestris	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Picea abies	.	+	.	.	.	.	.	.	+	.	.	+	+	+	.	.	+	.	.	.	.	.	.	.
Pinus sylvestris	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.
Quercus robur	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Rubus hirtus	+	+	+	+	.	+	.	+	.	.	.	+	1	1	.	+	.	.	.	.	.	.	.	.
Sambucus nigra	+	+	+	+	+	1	.	+	+	+	.	+	1	+	1	+	+	+	+	+	+	.	+	.	
Sorbus aucuparia	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.
Swida sanguinea	+	+	+	.	.	.	.	+	.	+	.	.	.	.	.	+	.	+	.	.	.	.	.	.
Ulmus glabra	+	+	+	+	+	+	+	+	+	+	+	+	+	.	.	.	.	+	.	+	+	+	+	+
Viburnum opulus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
Vinca minor	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.
Mosses																									
Atrichum undulatum	+	+	+	+	+	+	+	+	+	+	+	+	+	+	1	+	+	+	+	+	+	+	-	-	-
Plagiomnium undulatum	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1	+	1	-	-	-	
Polytrichum formosum	+	+	+	+	+	+	+	+	+	+	+	1	1	+	+	+	+	+	1	+	+	-	-	-	
Rhizomnium punctatum	1	1	1	1	1	1	1	1	1	1	1	+	+	1	1	1	+	+	+	+	1	-	-	-	

Location: Verkhniobuzke Pasma (Lviv Region, Zolochiv and Brody Districts). – rel. 1-21; Medobory Nature Reserve (Ternopil Region, Husiatyn District) – rel. 22-24.

- 1 – Ralo V.M. (10.07.2002+27.04.2003), Lviv Region, Brody District, Richky (1,5 km east of Pobich village);
- 2 – Ralo V.M. (17.06.2004+06.05.2004), Lviv Region, Brody District, Richky (1,5 km east of Pobich village);
- 3 – Ralo V.M. (05.07.2002+02.05.2003), Lviv Region, Brody District, Tsypryankova Dolyna (2 km north-west of Opaky village);
- 4 – Ralo V.M. (12.06.2004+02.05.2003), Lviv Region, Brody District, Tsypryankova Dolyna (2 km north-west of Opaky village, reserve “Sasivsky”);
- 5 – Ralo V.M. (03.07.2003+22.05.2004), Lviv Region, Zolochiv District, Derevyanky (1,5 km south of Koltiv village);
- 6 – Ralo V.M. (04.07.2003+22.05.2004), Lviv Region, Zolochiv District, Derevyanky (1,5 km south of Koltiv village);
- 7 – Ralo V.M. (09.07.2003+01.05.2004), Lviv Region, Brody District, valley of the Vyatyna (2 km south of Verkhobuzh village);
- 8 – Ralo V.M. (08.07.2005+16.05.2005), Lviv Region, Zolochiv District, Obertasova Hora (1 km south of Khmeliv);
- 9 – Ralo V.M. (17.08.2002+28.04.2003), Lviv Region, Zolochiv District, Rypyn (2 km north of Ushnia village);
- 10 – Ralo V.M. (13.07.2003+05.05.2004), Lviv Region, Brody District, Monastyr (1 km south-west of Pidhirtsi village);
- 11 – Ralo V.M. (09.07.2003+01.05.2004), Lviv Region, Brody District, valley of the Vyatyna (2,5 km north of Opaky village);
- 12 – Ralo V.M. (05.07.2002+02.05.2003), Lviv Region, Brody District, Tsypryankova Dolyna (2 km north-west of Opaky village);
- 13 – Ralo V.M. (10.07.2002+27.04.2003), Lviv Region, Brody District, Richky (2 km east of Pobich);
- 14 – Ralo V.M. (17.07.2003+05.05.2003), Lviv Region, Brody District, Plisnysko (1 km south of Pidhirtsi village);
- 15 – Ralo V.M. (01.08.2003+22.04.2004), Lviv Region, Zolochiv District, Rypyn (2 km north of Ushnia);
- 16 – Ralo V.M. (16.07.2005+11.05.2005), Lviv Region, Zolochiv District, Dovzhok (2 km south-east of Ruda-Koltivska);
- 17 – Ralo V.M. (04.07.2003+22.05.2004), Lviv Region, Zolochiv District, Derevyanky (2 km south of Koltiv);
- 18 – Ralo V.M. (3.07.2003+22.05.2004), Lviv Region, Zolochiv District, Derevyanky (2 km south of Koltiv);
- 19 – Ralo V.M. (04.07.2003+22.05.2004), Lviv Region, Zolochiv District, Derevyanky (2 km south of Koltiv);
- 20 – Ralo V.M. (04.07.2003+22.05.2004), Lviv Region, Zolochiv District, Derevyanky (2 km south of Koltiv);
- 21 – Ralo V.M. (04.07.2003+22.05.2004), Lviv Region, Zolochiv District, Derevyanky (1,5 km south of Koltiv);
- 22 – Onyshchenko V.A. (26.04.1997+02.08.1997), Krasnianske forestry, sq. 57, bottom of Slipyi Yar gully;
- 23 – Onyshchenko V.A. (26.04.1997) + Onyshchenko V.A., Panchenko S.M. (02.09.1997), Krasnianske forestry, sq. 57, bottom of Slipyi Yar gully;
- 24 – Onyshchenko V.A. (26.04.1997) + Onyshchenko V.A., Panchenko S.M. (02.09.1997), Krasnianske forestry, sq. 57, bottom of Slipyi Yar gully.

Number in table	1	2	3	4	5	6	7	8	9	10	11
Primula acaulis	+
Prunella vulgaris	1	.	.	.	.
Quercus petraea	+
Ranunculus repens	.	1	1	+	1	.	+	+	.	.	.
Rubus caesius	+	+	.	+
Rubus hirtus	+	4	.	1	1	.	.	.	.	.	.
Rubus idaeus	.	.	1	1	+	.	.	.	.	1	+
Rubus serpens	2	.
Salix caprea	+	.	1	.	.	.	.
Salix cinerea
Sambucus nigra	+	.	1	.	2	.	.	.	+	.	4
Scilla bifolia	+	-	-	-	-	-	-	+	+	.	.
Senecio ovatus	1	.	.	+	.
Solidago virgaurea	+	.	.	+	+
Sorbus aucuparia	1	.	.	.	+
Spiraea chamaedryfolia	1	.	.	.	.
Spiraea chamaedryfolia	1	.
Stellaria holostea	.	.	.	+	+
Swida sanguinea	+	+	.	.
Telekia speciosa	.	.	.	1	+	4	.	.	.	.	.
Tilia cordata	+
Trifolium repens
Urtica dioica	.	1	1	1	.	1	+	5	.	+	+
Valeriana tripteris	+	.
Distribution of trees and shrubs by height											
> 5.0 m											
Acer pseudoplatanus	-	-	-	-	-	-	-	.	.	4	.
Alnus incana	-	-	-	-	-	-	-	3	5	4	5
Fagus sylvatica	-	-	-	-	-	-	-	.	.	1	.
Fraxinus excelsior	-	-	-	-	-	-	-	.	.	1	.
Salix alba	-	-	-	-	-	-	-	4	2	.	.
0.5-5.0 m											
Acer pseudoplatanus	-	-	-	-	-	-	-	.	.	2	.
Alnus incana	-	-	-	-	-	-	-	.	.	1	.
Carpinus betulus	-	-	-	-	-	-	-	.	.	.	+
Grossularia uva-crispa	-	-	-	-	-	-	-	.	.	+	.
Lonicera xylosteum	-	-	-	-	-	-	-	.	.	+	.
Rubus idaeus	-	-	-	-	-	-	-	.	.	1	+
Sambucus nigra	-	-	-	-	-	-	-	.	+	.	4
Spiraea chamaedryfolia	-	-	-	-	-	-	-	.	.	1	.
Swida sanguinea	-	-	-	-	-	-	-	+	+	.	.
Tilia cordata	-	-	-	-	-	-	-	.	.	.	+
<5.0 m											
Acer pseudoplatanus	-	-	-	-	-	-	-	.	.	+	+
Alnus incana	-	-	-	-	-	-	-	.	+	+	+
Carpinus betulus	-	-	-	-	-	-	-	.	.	.	+
Daphne mezereum	-	-	-	-	-	-	-	.	.	+	.
Fraxinus excelsior	-	-	-	-	-	-	-	.	.	.	+
Grossularia uva-crispa	-	-	-	-	-	-	-	.	.	1	.
Lonicera xylosteum	-	-	-	-	-	-	-	.	.	+	.
Padus avium	-	-	-	-	-	-	-	.	+	.	.
Quercus petraea	-	-	-	-	-	-	-	.	.	.	+
Rubus caesius	-	-	-	-	-	-	-	+	+	.	+
Rubus serpens	-	-	-	-	-	-	-	.	.	2	.
Sorbus aucuparia	-	-	-	-	-	-	-	.	.	.	+
Spiraea chamaedryfolia	-	-	-	-	-	-	-
Spiraea chamaedryfolia	-	-	-	-	-	-	-	.	.	1	.
Swida sanguinea	-	-	-	-	-	-	-	+	+	.	.
Ulmus glabra	-	-	-	-	-	-	-	.	.	.	+
Mosses											
Brachythecium populeum	-	-	-	-	-	-	-	.	.	+	+
Eurhynchium hians	-	-	-	-	-	-	-	+	+	.	.
Hypnum cupressiforme	-	-	-	-	-	-	-	.	.	.	+
Paraleucobryum longifolium	-	-	-	-	-	-	-	.	.	+	+
Plagiomnium cuspidatum	-	-	-	-	-	-	-	.	.	+	+
Tortella tortuosa	-	-	-	-	-	-	-	.	.	+	+

- 1 – Chorney I.I. (17.05.2000), Chernivtsi Region, valley of the Malyi Siret, Solonets;
 2 – Lviv Region, Skolivski Beskydy National Nature Park, (Solomakha et al. 2004: table 3.21, rel. 1);
 3 – Lviv Region, Skolivski Beskydy National Nature Park, (Solomakha et al. 2004: table 3.21, rel. 2);
 4 – Yakushenko D.V., Solomakha I.V. (26.07.2002), Chernivtsi Region, Chernivtsi District, Vyzhnytsky National Nature Park (Chorney et al. 2005: table 5.2.11, rel. 1);
 5 – Tokaryuk A.I. (23.07.2004), Chernivtsi District, Vyzhnytsky National Nature Park (Chorney et al. 2005: table 5.2.11, rel. 2);
 6 – Chorney I.I., Drobit N.A. (23.07.2004), Chernivtsi District, Vyzhnytsky National Nature Park (Chorney et al. 2005: table 5.2.11, rel. 3);
 7 – Chorney I.I. (02.08.2005), Ivano-Frankivsk Region, Gorgany Nature Reserve, floodplain of the Bystrytsia Nadvirnianska (Klimuk et al. 2006: table 6.2.1, rel. 4);
 8 – Onyshchenko V.A. (27.08.2006+26.04.2007), Ivano-Frankivsk Region, Tysmenytsia District, state landscape reserve “Kozakova Dolyna”;
 9 – Onyshchenko V.A. (27.08.2006+26.04.2007), Ivano-Frankivsk Region, Tysmenytsia District, state landscape reserve “Kozakova Dolyna”;
 10 – Onyshchenko V.A. (26.06.2002), Ivano-Frankivsk Region, Nadvirna District, Karpatsky National Nature Park, Yamnianske forestry;
 11 – Onyshchenko V.A. (06.09.2005+10.05.2006), Zakarpatska Region, Rakhiv District, Carpathian Biosphere Reserve.

Table 71. Piceo-Alnetum Mráz 1959

Number in table	1	2	3	4	5	6	7
Exposition							SE
Inclination							3
Tree layer	40	60	50	90	90	80	50
Shrub layer							1
Herb layer	90	80	95	80	80	90	30
Mosses	30						35
Area (sq. m)	625	625	625	625	625	625	200
Number of vascular plants species	35	30	15	21	28	27	45
Point number on Fig. 27	2	2	4	1	1	1	3

D versus Alnetum incanae

<i>Caltha palustris</i> s.l.	2	2	1	4	3	5	+
<i>Carex remota</i>	2	1	.	.	.	.	1
<i>Dryopteris carthusiana</i>	1	+	.	+	1	+	+
<i>Equisetum sylvaticum</i>	.	1	+	3	+	+	.
<i>Galium palustre</i>	1	.	.	.	.	1	+
<i>Myosotis palustris</i>	1	1	.	.	+	1	.
<i>Picea abies</i>	4	4	1	1	+	1	1
<i>Solanum dulcamara</i>	+	1	.	.	.	1	.
<i>Vaccinium myrtillus</i>	1	1	.	.	.	.	+

D versus Fraxino-Alnetum

<i>Abies alba</i>	.	.	.	.	3	.	+
<i>Astrantia major</i>	.	.	1	.	.	.	.
<i>Chaerophyllum hirsutum</i>	.	.	.	.	.	+	+
<i>Petasites albus</i>	.	.	.	1	1	.	+
<i>Rubus hirtus</i>	.	1	5	.	.	+	.
<i>Senecio ovatus</i>	+	1	.	1	1	.	+

Ch, D Alnion incanae

<i>Alnus glutinosa</i>	.	.	2	.	.	.	.
<i>Alnus incana</i>	4	5	4	5	5	5	3
<i>Cardamine amara</i>	.	.	.	1	1	.	.
<i>Cirsium oleraceum</i>	1	2	.	.	1	1	.
<i>Circaea alpina</i>	1	2	.	.	.	.	+
<i>Filipendula ulmaria</i>	1	2	.	.	2	2	.
<i>Lycopus europaeus</i>	1	1	.	.	.	.	.
<i>Lysimachia vulgaris</i>	.	.	1	.	.	.	.
<i>Ranunculus repens</i>	1	1	.	2	1	3	1
<i>Scirpus sylvaticus</i>	.	.	.	.	.	1	.
<i>Stellaria nemorum</i>	.	.	.	+	2	.	.

Ch Fagetalia sylvaticae

<i>Acer pseudoplatanus</i>	1	.	.	.	1	.	3
<i>Asarum europaeum</i>	.	.	.	.	+	.	.
<i>Carex sylvatica</i>	.	.	.	.	.	.	+
<i>Daphne mezereum</i>	+	.	.	.	.	+	+

Number in table	1	2	3	4	5	6	7
Dryopteris filix-mas	.	.	.	+	.	.	+
Euphorbia amygdaloides	.	.	.	.	.	.	+
Fagus sylvatica	.	1	.	.	.	.	1
Galium odoratum	.	.	.	1	.	.	.
Impatiens noli-tangere	.	2	.	.	.	.	+
Lamium galeobdolon	.	.	.	1	.	.	2
Mercurialis perennis	.	.	.	.	2	.	+
Paris quadrifolia	.	.	.	+	+	.	.
Stachys sylvatica	+	.	.	.	.	.	+
Symphytum cordatum	.	.	.	.	.	.	+
Viola reichenbachiana	.	.	.	.	.	.	1
Other species							
Agrostis stolonifera	1	.	.	.	.	.	+
Athyrium filix-femina	1	1	1	.	1	1	1
Betula pendula	1	.	.	.	.	.	.
Campanula patula	+	.	.	.	.	.	.
Cardamine impatiens	.	.	.	.	.	2	.
Carduus cinereus	1	.	.	.	.	.	.
Carex brizoides	3	2	.	1	.	.	.
Cirsium rivulare	1	.	.	.	.	.	.
Corylus avellana	.	2	.	.	+	+	.
Deschampsia caespitosa	.	.	.	+	.	+	.
Dryopteris dilatata	.	.	.	.	.	.	+
Equisetum palustre	.	.	.	.	.	.	+
Equisetum telmateia	.	.	.	.	+	+	.
Fragaria vesca	.	.	.	.	.	.	+
Frangula alnus	.	.	1	.	.	.	.
Gentiana asclepiadea	1	.	.	.	.	.	.
Geranium robertianum	.	.	.	.	.	.	+
Glechoma hirsuta	.	.	.	.	+	.	.
Gymnocarpium dryopteris	.	.	.	.	.	.	+
Hypericum maculatum	.	1	.	.	.	.	.
Juncus effusus	1	1	.	.	.	.	.
Knautia dipsacifolia	.	.	.	.	.	+	.
Leucanthemum rotundifolium	.	.	.	.	1	+	.
Lonicera nigra	.	2	.	.	1	.	.
Lonicera xylosteum	.	.	.	.	.	.	+
Malus sylvestris	.	.	1	.	.	.	.
Mycelis muralis	.	.	.	+	.	.	.
Myosoton aquaticum	.	.	.	.	.	.	1
Oxalis acetosella	1	1	.	.	.	.	2
Phegopteris connectilis	.	1	.	.	.	.	.
Populus tremula	.	.	1	.	.	.	.
Prunella vulgaris	1	1	.	.	.	.	+
Pteridium aquilinum	.	.	1	.	.	.	.
Ranunculus flammula	+	.	.	.	.	.	.
Rosa pendulina	.	.	.	.	.	.	+
Rubus idaeus	1	.	.	2	.	+	+
Rumex obtusifolius ssp. sylvestris	.	.	.	.	.	.	+
Salix aurita	1	1	.	.	.	.	.
Salix cinerea	.	.	.	.	1	.	.
Sambucus nigra	.	.	2	.	.	.	.
Sambucus racemosa	.	.	.	.	1	+	.
Sorbus aucuparia	1	2	.	+	1	+	.
Streptopus amplexifolium	1	+	.	.	.	.	.
Urtica dioica	.	.	+	+	.	1	.
Valeriana dioica	.	.	.	.	.	3	.
Veronica beccabunga	.	.	.	.	.	.	+
Viburnum opulus	.	.	.	+	+	.	.
Viola biflora	1	.	.	.	.	.	.

No data on spring ephemeroids;

1 – Yakushenko D.M., Solomakha I.V. (04.08.2005), Gorgany Nature Reserve (Klimuk et al. 2006: 244-245, tab. 6.2.1., rel. 1);
 2 – Yakushenko D.M., Solomakha I.V. (04.08.2005), Gorgany Nature Reserve (Klimuk et al. 2006: 244-245, tab. 6.2.1., rel. 2);

- 3 – Yakushenko D.M., Solomakha I.V. (26.07.2002), Vyzhnytsky National Nature Park (Chorney et al. 2005: 170, tab. 5.2.11., rel. 4);
 4 – Skolivski Beskydy National Nature Park (Solomakha et al. 2004: 95-96, tab. 3.21., rel. 4);
 5 – Skolivski Beskydy National Nature Park (Solomakha et al. 2004: 95-96, tab. 3.21., rel. 5);
 6 – Skolivski Beskydy National Nature Park (Solomakha et al. 2004: 95-96, tab. 3.21., rel. 6);
 7 – Onyshchenko V.A. (30.07.2002), Ivano-Frankivsk Region, Verkhovyna District, Zelenske forestry.

Table 72. Ficario-Ulmetum minoris Knapp 1942 em. J.Matuszkiewicz 1976

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
Exposition	-	-	-	-	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Inclination	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Tree layer	80	80	45	75	70	75	40	60	80	75	80	80	80	60	70	80	60	70	65	45	80	0	-1	75	75	60	50	50	
Shrub layer	8	3	22	0	30	20	30	70	25	2	20	15	50	20	4	0	15	15	25	5	40	14	10	10	12	30	20	10	
Herb layer in summer relevé	35	20	70	95					50	85	65	55	30	85			30	20	7	35	40	9	58	10	10	5	7	10	
Herb layer in spring relevé	50	50	70		40	70	70	60	25	20	55			80	80	90	50	25	10	50				50	30	12	20	35	
Mosses	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Area (sq. m)	400	900	900	1500	100	100	100	100	600	900	1600	1600	1500	900	900	900	900	800	900	500	400	400	200	400	400	400	900	900	
Number of species of vascular plants	28	31	48	30	21	18	20	26	31	32	38	29	35	33	37	27	31	24	27	35	31	36	27	23	31	25	41	26	
Point number on Fig. 28	10	10	7	1	3	3	3	3	10	10	6	6	6	7	1	1	8	8	8	8	10	10	10	10	10	10	10	10	
Syntaxon	1										2										3								

D subass.**chrysosplenietosum**

Asarum europaeum

+ + + . 1 . + . . + + + . . + +

Chrysosplenium

. 2 + 2 1 2 2 2 . . + . . + . 1

alternifolium

Corydalis cava

1 . . + 1 . 1 1 + + . . 1 . 1 4

Corydalis solida

. + . . 2 2 1 + . 1 . + + . + 1

Gagea lutea

+ + + + 1 + 1 + . + + + + . +

Ficaria verna

+ 2 3 2 2 4 4 4 1 2 2 5 5 3 . 1

Lamium galeobdolon

. + 4 + 2 + . 3 + +

Miliium effusum

. . . + . . . + . + + . . . + +

D subass. typicum

Actaea spicata

. +

+ . + + + +

D subass. franguletosum**alni**

Acer tataricum

. . + +

Frangula alnus

. .

Glechoma hederacea

. .

Viola hirta

. .

+ . + + 2
1 + + + .
+ 1 . + 1
. . + + .**D Ficario-Ulmetum,****Ulmenion**

Quercus robur

2 . 2 . 5 5 4 3 2 . + . + . 1 . 4 4 5 . 4 4 4 4 5 + + 4

Ulmus minor

. 4 2 + 2 3 2 . + 3 . . . 4 . . +

Ch, D Alnion incanae

Alnus glutinosa

. . 3 2 5 5 4 5 5 4 4 4

Alnus incana

. .

Impatiens noli-tangere

. 3 + 1 . . . 2 . +

Padus avium

+ . 3 + + + . . 1 2 1 . 1 2 3 1 . 2

Ribes nigrum

. + . + .

Ribes spicatum

. . + .

Stellaria nemorum

. 1 + +

Ch Fagetalia sylvaticae

Acer pseudoplatanus

. + 4 + + +

Adoxa moschatellina

. + + 1 . + . + +

Allium ursinum

. + 1 .

Anemone ranunculoides

2 1 + + 2 2 . . 1 1 + 2 . + + +

Carex pilosa

. + .

Carex sylvatica

4 + + .

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
<i>Daphne mezereum</i>	+	
<i>Dentaria bulbifera</i>	.	.	.	2	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Dryopteris filix-mas</i>	.	.	.	1	.	+	1	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.
<i>Circaea lutetiana</i>	.	.	+	+	.	+	+	+	+	1	1	+	.	.	.	.	.	.
<i>Festuca gigantea</i>	.	.	+	+	1	.	.	.	+	
<i>Gagea minima</i>	.	.	+	
<i>Galium odoratum</i>	.	.	+	.	+	+	+	.	1	+	+	.	.	.	.	.	.	.	+	+	.	.	.	.
<i>Isopyrum thalictroides</i>	.	.	.	+	+	+	2	.	.	.	.	.	.	.	.	.	.	.
<i>Lathyrus vernus</i>	+	.	+	
<i>Mercurialis perennis</i>	+	+	
<i>Paris quadrifolia</i>	+	.	.	.	+	.	.	.	+	+	+	+	.	.	+	+	+	+	.	+	.	+	+	.	
<i>Polygonatum multiflorum</i>	+	.	+	+	+	+	+	+	.	+	+	+	+	.	+	.	.	.	+	.	
<i>Pulmonaria obscura</i>	+	+	1	+	+	+	+	+	.	+	2	+	2	+	.	+	1	.	.	.	.	4	+	4	.	.	.	.
<i>Ranunculus cassubicus</i>	.	.	+	+	
<i>Scrophularia nodosa</i>	+	.	+	
<i>Stachys sylvatica</i>	+	+	+	+	+	+	+	.	+	+	
<i>Ulmus glabra</i>	2	+	.	.	.	.	.	.	3	.	.	1	3	.	.	.	2	1	2	.	.	1	+	.	.	.	.	+
<i>Viola reichenbachiana</i>	.	.	+	
Other species																													
<i>Acer campestre</i>	1	2	2	.	.	.	.	+	2	+	1	1	.	.	.	.	2	+	+	2	.	.	.	.	+	+	+	.
<i>Acer negundo</i>	.	+	.	.	3	3	2	2	.	.	.	.	.	.	.	.	.	.	+	.	2	1	2	.	.	.	+	.
<i>Acer platanoides</i>	+	.	+	+	.	.	1	.	.	+	+	2	1	.	+	.	+	3	.	+	+	2	+	+	.	1	+	+	
<i>Aconitum anthora</i>	+	
<i>Aegopodium podagraria</i>	2	2	+	3	2	3	3	2	2	.	+	+	2	+	+	1	2	3	1	4	.	.	.	.	.	1	.	.
<i>Ajuga reptans</i>	+	
<i>Alliaria petiolata</i>	.	.	+	+	.	.	+	.	+	+	+	+	.	
<i>Anemone nemorosa</i>	.	.	.	4	.	.	.	.	.	.	+	+	1	.	5	4	.	.	.	.	.	.	.	.	.	.	.	.
<i>Angelica sylvestris</i>	+	+	
<i>Anthriscus sylvestris</i>	+	
<i>Arctium sp.</i>	+	.	+	
<i>Arctium tomentosum</i>	.	+	+	
<i>Aristolochia clematitis</i>	+	
<i>Arum besserianum</i>	+	
<i>Athyrium filix-femina</i>	+	.	.	.	+	1	+	+	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Betonica officinalis</i>	+	
<i>Betula pendula</i>	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	1	1	.	.	.	.	.	+	.	.	.	1	.
<i>Bistorta officinalis</i>	+	
<i>Brachypodium sylvaticum</i>	+	.	+	.	.	.	+	+	+
<i>Campanula rapunculoides</i>	+	
<i>Cardamine impatiens</i>	
<i>Carex brizoides</i>	+	
<i>Carex cespitosa</i>	
<i>Carex spicata</i>	+	.	.	
<i>Carex pallescens</i>	+	
<i>Carex sp.</i>	+	
<i>Carpinus betulus</i>	.	.	1	1	.	.	.	.	.	.	+	.	2	.	2	4	1	+	2	+	.	.	.	+	.	+	+	+
<i>Cerasus avium</i>	1	.	1	1	4	4	2	.	.	.	.	1	
<i>Chaerophyllum aromaticum</i>	+	+	+	+	1	.	.	.	.	.
<i>Chaerophyllum bulbosum</i>	.	.	+	
<i>Chaerophyllum temulum</i>	.	+	+	+	+	.	.	.	+	.	.	+	+	+	+	+	.	.	.	
<i>Chelidonium majus</i>	+	
<i>Cimicifuga europaea</i>	+	
<i>Cirsium oleraceum</i>	.	+	+	+	
<i>Convallaria majalis</i>	+	+	.	+	.	.	1	.	2	.	
<i>Corydalis intermedia</i>	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Corylus avellana</i>	1	.	+	+	4	3	4	5	1	+	1	.	3	.	1	.	.	.	.	.	.	3	.	.	.	3	+	.
<i>Crataegus curvisepala</i>	.	.	+	+	.	.	+	+	1	1	.	+	+	+	
<i>Cystopteris fragilis</i>	+	
<i>Deschampsia caespitosa</i>	+	+	.	+	+	.	+	
<i>Dipsacus pilosus</i>	+	+	+	
<i>Dryopteris carthusiana</i>	.	.	+	.	.	+	.	+	.	+	+	.	+	+	.	+	+	+	
<i>Equisetum pratense</i>	
<i>Euonymus europaea</i>	+	+	+	+	.	.	.	1	.	+	+	+	+	+	.	+	+	+	.	3	+	1	+	+	1	+	+		
<i>Euonymus verrucosa</i>	+	+	
<i>Eupatorium cannabinum</i>	+	
<i>Fallopia dumetorum</i>	+	+	
<i>Filipendula ulmaria</i>	+	.	.	.	+	+	

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	
<i>Fragaria vesca</i>	.	.	+	
<i>Fraxinus excelsior</i>	4	2	2	4	.	+	+	.	4	2	4	2	3	2	3	4	1	2	.	4	+	+	.	2	+	4	4	+	
<i>Galanthus nivalis</i>	+
<i>Galeopsis pubescens</i>	+
<i>Galeopsis sp.</i>	.	.	+
<i>Galeopsis speciosa</i>	+
<i>Galium aparine</i>	.	.	+	+	1	.	+	.	+	.	.	2	+	+	+	+	+	+	1	.	.	.	.	.
<i>Galium boreale</i>	+	.	.	.
<i>Galium palustre</i>	+
<i>Geranium phaeum</i>	+
<i>Geranium robertianum</i>	+	.	+	+	+	.	+	+	.	+	+
<i>Geranium sp.</i>	+
<i>Geum rivale</i>	+	+	1	1	.	.	.	.	.
<i>Geum urbanum</i>	+	+	2	.	.	+	.	+	2	+	+	+	+	3	.	.	+	+	+	.	+	+	.	+	+	.	+	1	
<i>Glechoma hirsuta</i>	+	.	+	+	.	.	+	+	2	+	+	.	.	1	+	+	1	.	+	+	.	.	.	.	.	+	.	.	.
<i>Hepatica nobilis</i>	+
<i>Humulus lupulus</i>	+	.	.	+	+	+	.	+
<i>Impatiens parviflora</i>	.	2	.	.	.	.	.	.	2	4	.	.	.	.	.	.	.	.	.	.	.	2	+	2	4	3	.	.	2
<i>Lamium maculatum</i>	.	+	2	.	+	.	+	.	.	+	3	2	.	3	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Lapsana communis</i>	+	.	+
<i>Lathraea squamaria</i>	+
<i>Lilium martagon</i>	+
<i>Listera ovata</i>	+
<i>Lysimachia nummularia</i>	+	.	+	+	.	+	+	.	+	+	+	+
<i>Lysimachia vulgaris</i>	+	+	.	.	.
<i>Majanthemum bifolium</i>	+	+	1	.
<i>Malus sylvestris</i>	1	+	.	.	.	.	.	.
<i>Melampyrum nemorosum</i>	+	.
<i>Melica nutans</i>	+	.	.
<i>Moehringia trinervia</i>	+	.	+	+	.	.	+
<i>Mycelis muralis</i>	+	+	.	.	.
<i>Myosoton aquaticum</i>	.	.	.	+	.	.	.	1	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.
<i>Omphalodes scorpioides</i>	+
<i>Oxalis acetosella</i>	+
<i>Picea abies</i>	+
<i>Pinus sylvestris</i>	2	.	.	.	.
<i>Poa nemoralis</i>	+	.
<i>Polygonatum hirtum</i>	+	+	+
<i>Populus tremula</i>	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	1	.	.	.	.	+	3	3	.
<i>Prunus spinosa</i>	+
<i>Pyrus communis</i>	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	1	.	1	.	.	.	.
<i>Ranunculus repens</i>	.	+	+	.	+
<i>Rubus caesius</i>	1	.	+	.	.	.	.	.	1	+	.	.	+	2	.	.	.	.	.	.	+	+	+	+	1	+	2	1	1
<i>Rubus idaeus</i>	+
<i>Salix alba</i>	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Salix cinerea</i>	1	.	1	+	.	.	.	.
<i>Salix fragilis</i>	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Sambucus nigra</i>	.	1	1	.	.	.	.	.	.	.	1	2	1	+	.	.	1	+	+	1	3	+	1	.	.	.	.	+	+
<i>Scilla bifolia</i>	+
<i>Solanum dulcamara</i>	+
<i>Sorbus aucuparia</i>	.	.	+	+	+	.
<i>Stellaria holostea</i>	.	.	.	+	1	.	.	.	.	.	.	.	.	.	.	+	2	.	.	.	.	.	.	.	+	.	.	.	.
<i>Strophostoma sparsiflora</i>	+
<i>Swida sanguinea</i>	+	.	1	.	.	.	.	.	+	.	.	.	1	1	.	.	.	.	.	.	.	+	+	.	+	+	+	+	+
<i>Taraxacum officinale</i>	+	.
<i>Tilia cordata</i>	4	.	.	.	.	.	.	4	.	.	.	.	.	.	.	+	.	2	.	1	.	.	.	.	1	1	4	3	.
<i>Torilis japonica</i>	+
<i>Urtica dioica</i> s.l.	+	2	3	2	+	+	1	1	2	4	3	4	+	3	+	+	4	1	1	1	2	+	4	+	+	.	.	3	
<i>Veratrum lobelianum</i>	.	.	+
<i>Viburnum opulus</i>	+	+	+	+	+	+	+	+	+	.	+	+	+	.
<i>Viola mirabilis</i>	1	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	1	.
<i>Viola odorata</i>	+
Distribution of trees and shrubs by height																													
> 5.0 m																													
<i>Acer campestre</i>	1	2	1	.	.	.	.	.	2	.	.	1	.	.	.	.	1	.	.	2	.	.	.	.	.	.	+	.	.
<i>Acer negundo</i>	2	1	1	.	.	.	.	.
<i>Acer platanoides</i>	.	.	+	.	.	.	1	.	.	.	.	2	.	.	.	.	.	3	.	.	.	2	.	.	.	1	.	.	.

Number in table	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
<i>Crataegus curvisepala</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	+	.	.	.	.	+
<i>Daphne mezereum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Euonymus europaea</i>	+	+	+	+	.	.	.	.	+	.	+	+	+	.	+	.	+	+	+	.	+	+	.	+	+	1	+	+
<i>Euonymus verrucosa</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	+	.	.
<i>Frangula alnus</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	+	+	.
<i>Fraxinus excelsior</i>	+	+	+	.	.	.	.	.	1	+	+	.	+	.	.	.	+	+	.	+	+	+	.	+	+	+	1	+
<i>Padus avium</i>	.	.	+	+	.	.	.	.	+	+	.	.	.	1	+	.	+	+	1	.	.	1	.	.	.	.	.	.
<i>Populus tremula</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	+	+	+
<i>Pyrus communis</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Quercus robur</i>	.	.	+	.	.	.	.	.	.	.	+	.	+	.	.	.	.	+	+	.	.	.	.	.	.	+	+	+
<i>Ribes nigrum</i>	.	+	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Ribes spicatum</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Rubus caesius</i>	1	.	+	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Rubus idaeus</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.
<i>Sambucus nigra</i>	.	.	.	.	.	.	.	.	.	.	.	+	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Sorbus aucuparia</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Swida sanguinea</i>	+	.	.	.	.	.	.	.	.	.	.	.	.	+	+	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Tilia cordata</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
<i>Ulmus glabra</i>	+	.	.	.	.	.	.	.	.	.	.	.	.	3	.	.	.	+	+	+	.	.	.	.	.	.	.	.
<i>Ulmus minor</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	.	.	.	+
<i>Viburnum opulus</i>	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	+

Subassociations: 1 – Ficario-Ulmetum chrysosplenietosum Knapp 1942 em. J. Matuszkiewicz 1976, 2 – Ficario-Ulmetum typicum, 3 – Ficario-Ulmetum franguletosum alni subass. nov. prov.

- 1 – Onyshchenko V.A. (21.06.2003+12.04.2004), Kyiv, botanical reserve “Lisnyky”;
 2 – Onyshchenko V.A. (14.08.2003+07.04.2004), Kyiv, Seriakove forest;
 3 – Onyshchenko V.A., Yuglichek L.S. (22.07.2004+04.05.2004), Khmelnytsky Region, Khmelnytsky District, floodplain of the South Bug;
 4 – Onyshchenko V.A. (20.04.2002), Volyn Region, Kivertsi District, Tsuman forest, Sylenske forestry, sq. 2;
 5 – Panchenko S.M. (09.05.2003), Chernihiv Region, Korop District, near Vyshenky;
 6 – Panchenko S.M. (09.05.2003), Chernihiv Region, Korop District, near Vyshenky;
 7 – Panchenko S.M. (09.05.2003), Chernihiv Region, Korop District, near Vyshenky;
 8 – Panchenko S.M. (10.05.2003), Chernihiv Region, Korop District, near Budyshche;
 9 – Onyshchenko V.A. (21.06.2003+12.04.2004), Kyiv, botanical reserve “Lisnyky”;
 10 – Onyshchenko V.A. (11.07.2003+12.04.2004), Kyiv, botanical reserve “Lisnyky”;
 11 – Onyshchenko V.A., Panchenko S.M. (04.09.1997) + Onyshchenko V.A. (04.1998), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Horodnytske forestry;
 12 – Onyshchenko V.A. (21.04.1997+20.06.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Horodnytske forestry, sq. 29;
 13 – Onyshchenko V.A. (30.04.1997+13.08.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Viknianske forestry, sq. 2 (Hrymailiv forest);
 14 – Onyshchenko V.A., Yuglichek L.S. (22.07.2004+04.05.2004), Khmelnytsky Region, Khmelnytsky District, floodplain of the South Bug;
 15 – Onyshchenko V.A. (22.04.2002), Volyn Region, Kivertsi District, Tsuman forest, Tsumanske forestry, sq. 7;
 16 – Andrienko T.L. (18.04.2002), Volyn Region, Kivertsi District, Tsuman forest, Sylenske forestry, sq. 2;
 17 – Onyshchenko V.A. (05.09.2003+02.05.2004), Vinnytsia Region, Koziatyn District, botanical reserve “Sestrynivska Dachka”;
 18 – Onyshchenko V.A. (05.09.2003+02.05.2004), Vinnytsia Region, Koziatyn District, botanical reserve “Sestrynivska Dachka”;
 19 – Onyshchenko V.A. (05.09.2003+02.05.2004), Vinnytsia Region, Koziatyn District, botanical reserve “Sestrynivska Dachka”;
 20 – Onyshchenko V.A. (05.09.2003+02.05.2004), Vinnytsia Region, Koziatyn District, botanical reserve “Sestrynivska Dachka”;
 21 – Onyshchenko V.A. (02.05.2008), Kyiv, Teremky forest;
 22 – Onyshchenko V.A. (02.05.2008), Kyiv, Teremky forest;
 23 – Onyshchenko V.A. (02.05.2008), Kyiv, Teremky forest;
 24 – Onyshchenko V.A. (19.07.2003+12.04.2004), Kyiv, botanical reserve “Lisnyky”;
 25 – Onyshchenko V.A. (19.07.2003+12.04.2004), Kyiv, botanical reserve “Lisnyky”;
 26 – Onyshchenko V.A. (11.08.2003+05.04.2004), Kyiv, Volodarske forest;
 27 – Onyshchenko V.A. (11.08.2003+05.04.2004), Kyiv, Volodarske forest;
 28 – Onyshchenko V.A. (14.08.2003+07.04.2004), Kyiv, Bychok forest.

Table 73. Fraxino-Alnetum W. Matuszkiewicz 1952

Number in table	1	2	3	4	5	6	7	8	9
Exposition	-	-	-	-	-	-	-	-	-
Inclination	0	0	0	0	0	0	0	0	0
Tree layer	45	30	60	60	80	50	90	72	65
Shrub layer	0	20	50	50	30	0	20	2	5

Number in table	1	2	3	4	5	6	7	8	9
Herb layer in summer relevé	85	60	50		30	90	35	80	
Herb layer in spring relevé	50		80	90	90	12	60		30
Mosses	0	15	0	0	0			0	0
Area (sq. m)	300	900	2500	2500	2500	1500		400	900
Number of species of vascular plants	26	31	31	27	30	40	32	31	38
Point number on Fig. 29	6	6	3	3	3	2	7	4	5

D Fraxino-Alnetum, Ch Alnetea glutinosae

<i>Alnus glutinosa</i>	4	4	3	5	5	5	5	5	5
<i>Cardamine amara</i>	.	1	4	1	.	1	.	.	+
<i>Carex elongata</i>	.	.	.	.	.	.	+	.	.
<i>Dryopteris cristata</i>	.	.	.	.	.	.	+	.	.
<i>Frangula alnus</i>	.	.	2	.	.	+	2	.	.
<i>Galium palustre</i>	.	.	.	.	.	+	.	+	+
<i>Iris pseudacorus</i>	.	.	.	.	.	.	.	.	+
<i>Lycopus europaeus</i>	.	.	+	.	.	+	.	.	.
<i>Lysimachia vulgaris</i>	.	.	+	.	.	+	1	.	+
<i>Ribes nigrum</i>	+	+	.	+	.	.	.	.	1
<i>Salix cinerea</i>	.	.	.	.	.	.	2	.	.
<i>Scutellaria galericulata</i>	.	.	.	.	+	.	+	.	.
<i>Solanum dulcamara</i>	.	+	.	.	.	.	.	+	.

Ch, D Alnion incanae

<i>Caltha palustris</i>	.	.	+	+	.	2	.	.	+
<i>Circaea lutetiana</i>	.	+	.	.	.	+	.	.	.
<i>Cirsium oleraceum</i>	+	+	.	+	.	+	.	.	+
<i>Chrysosplenium alternifolium</i>	1	2	2	.	.	+	+	.	+
<i>Festuca gigantea</i>	.	.	.	.	.	+	.	+	.
<i>Padus avium</i>	+	2	.	+	.	.	+	1	+
<i>Stellaria nemorum</i>	1	2	.	.	.	.	.	+	.
<i>Ranunculus repens</i>	.	+	+	.	.	2	.	.	+

Ch Fagetalis sylvaticae

<i>Acer pseudoplatanus</i>	.	.	.	.	.	+	.	+	.
<i>Allium ursinum</i>	.	.	+	5	.	.	.	.	.
<i>Anemone ranunculoides</i>	3	.	.	+	+	.	4	+	+
<i>Asarum europaeum</i>	+	+	.	+	2	.	.	.	+
<i>Carex pilosa</i>	.	.	.	.	1	.	.	.	.
<i>Corydalis cava</i>	.	.	.	+	.	.	.	.	.
<i>Dentaria glandulosa</i>	.	.	+	.	.	.	.	.	.
<i>Ficaria verna</i>	3	.	2	.	+	2	.	.	+
<i>Galium odoratum</i>	.	+	.	.	.	.	.	.	.
<i>Impatiens noli-tangere</i>	1	.	.	.	.	.	1	.	.
<i>Isopyrum thalictroides</i>	.	.	.	4	+	.	.	.	.
<i>Lamium galeobdolon</i>	.	2	.	1	2	.	.	.	.
<i>Mercurialis perennis</i>	.	.	+	.	.	.	.	.	.
<i>Milium effusum</i>	.	.	.	.	.	.	+	.	.
<i>Paris quadrifolia</i>	+	.	+	+	+	.	+	.	+
<i>Pulmonaria obscura</i>	.	+	.	.	.	+	.	.	.
<i>Ranunculus cassubicus</i>	.	.	+	+	.	.	.	.	.
<i>Sanicula europaea</i>	.	.	.	.	+	.	.	.	.
<i>Scrophularia nodosa</i>	.	.	.	.	.	+	+	.	.
<i>Stachys sylvatica</i>	+	.	.	+	+	.	.	+	.
<i>Ulmus glabra</i>	+	1	.	.	.	.	.	+	+

Ch Quercu-Fagetea

<i>Acer campestre</i>	1	.	.	.	.	.	.	+	+
<i>Acer platanoides</i>	+	1	+	.	.	+	+	+	+
<i>Aegopodium podagraria</i>	5	1	+	3	2	.	.	+	.
<i>Anemone nemorosa</i>	.	.	.	1	5	+	.	.	.
<i>Corylus avellana</i>	.	2	4	5	4	.	.	.	+
<i>Euonymus europaea</i>	.	+	.	+	.	+	.	+	+
<i>Euonymus verrucosa</i>	.	.	+	.	3	.	.	.	.
<i>Fraxinus excelsior</i>	.	.	4	.	.	+	.	+	.
<i>Poa nemoralis</i>	.	.	.	.	.	+	.	.	.

Number in table	1	2	3	4	5	6	7	8	9
Ch Phragmito-Magnocaricetea									
Carex acutiformis	3
Phragmites australis	1	.	.
Ch Molinietaia									
Angelica sylvestris	+
Geum rivale	1	1	.	+	+	.	4	.	1
Scirpus sylvaticus	1	.	.	.
Other species									
Acer negundo	+	.
Acer tataricum	+
Ajuga reptans	.	.	.	+	+
Alisma plantago-aquatica	.	.	+
Anemone sylvestris	.	.	.	+
Archangelica officinalis	1
Athyrium filix-femina	+	+	.	.	.	+	.	.	+
Betula pendula	.	.	+	.	2	.	4	.	.
Calamagrostis arundinacea	+	.	.
Calamagrostis epigeios	.	.	+
Carex brizoides	+
Carex sp.	.	+
Carpinus betulus	+
Chaerophyllum temulum	2	.
Conium maculatum	+	.
Convallaria majalis	+
Crataegus curvisepala	+
Cruciata glabra	.	.	+
Deschampsia caespitosa	.	.	.	+	.	+	.	.	.
Dipsacus pilosus	+	.
Dryopteris carthusiana	+	+	.	.	+	+	+	+	+
Equisetum hyemale	+
Filipendula ulmaria	+	+	4	1	+	1	2	.	+
Galium aparine	+	+	.	2	+
Geranium robertianum	+	.	.	.
Geum urbanum	+	.	+	.
Glechoma hederacea	+	.	.	.
Glechoma hirsuta	2	+
Glyceria plicata	+	.	.
Humulus lupulus	+	+	+	.	.	.	+	.	+
Impatiens parviflora	1	2	.	.	.	.	.	.	.
Lamium maculatum	+	2	2	.	.	+	.	.	.
Lapsana communis	+	.
Listera ovata	.	.	.	+
Lysimachia nummularia	.	.	2	.	+	+	.	+	+
Majanthemum bifolium	.	+
Moehringia trinervia	+	+	.
Myosoton aquaticum	.	.	+	+
Oxalis acetosella	+
Poa trivialis	+	.	.	.
Polygonatum odoratum	+	.	.
Populus tremula	2	.	.
Primula acaulis	+
Quercus robur	.	.	3	.	+	+	1	.	.
Rubus caesius	+	.	.	.
Rubus idaeus	4	.	.
Rumex acetosa	.	.	+
Rumex obtusifolius ssp. sylvestris	+	.	.	.
Salix triandra	+	.	.
Sambucus nigra	+	.	1	+
Sorbus aucuparia	+	.	.
Stellaria holostea	2	.	.	.	.
Swida alba	.	1	.	.	.	.	.	.	.
Swida sanguinea	+
Taraxacum officinale	+	.	.	.
Tilia cordata	.	1	3	.	.	.	.	1	1
Ulmus laevis
Ulmus minor	+	1
Urtica dioica	1	3	.	.	.	+	3	5	1
Veratrum lobelianum	+	.	+	.	.

Number in table	1	2	3	4	5	6	7	8	9
<i>Veronica beccabunga</i>	+	.	.	.
<i>Viburnum opulus</i>	+	+
<i>Viola mirabilis</i>	.	.	.	+
Distribution of trees, shrubs and lianas by height									
> 5.0 m									
<i>Acer platanoides</i>	.	1	+	.	.	.	.	.	.
<i>Alnus glutinosa</i>	4	4	3	5	5	5	5	5	5
<i>Betula pendula</i>	.	.	+	.	2	.	4	.	.
<i>Carpinus betulus</i>	+
<i>Corylus avellana</i>	2	.	.	.	.
<i>Fraxinus excelsior</i>	.	.	4	.	.	.	.	.	.
<i>Populus tremula</i>	2	.	.
<i>Quercus robur</i>	.	.	3	.	+	.	1	.	.
<i>Tilia cordata</i>	.	1	3	.	.	.	.	1	1
<i>Ulmus minor</i>	1
0.5-5.0 m									
<i>Acer campestre</i>	+	+	+
<i>Acer negundo</i>	+	.
<i>Acer platanoides</i>	.	+	+	.	+
<i>Acer pseudoplatanus</i>	+	.
<i>Acer tataricum</i>	+
<i>Alnus glutinosa</i>	+	.	.	.
<i>Corylus avellana</i>	.	2	4	5	4	.	.	.	+
<i>Euonymus europaea</i>	.	+	.	+	.	+	.	.	.
<i>Euonymus verrucosa</i>	.	.	+	.	3	.	.	.	.
<i>Frangula alnus</i>	.	.	2	.	.	+	2	.	.
<i>Fraxinus excelsior</i>	+	.	.	.
<i>Humulus lupulus</i>	.	+	+
<i>Padus avium</i>	+	2	.	+	.	.	+	1	+
<i>Quercus robur</i>	+	.	.
<i>Ribes nigrum</i>	+	+	.	+	1
<i>Rubus caesius</i>	+	.	.	.
<i>Rubus idaeus</i>	4	.	.
<i>Salix cinerea</i>	2	.	.
<i>Salix triandra</i>	+	.	.
<i>Sambucus nigra</i>	+	.	1	+
<i>Solanum dulcamara</i>	.	+
<i>Sorbus aucuparia</i>	+	.	.
<i>Swida alba</i>	.	1	.	.	.	.	.	.	.
<i>Swida sanguinea</i>	+
<i>Ulmus glabra</i>	+	1	.	.	.	.	.	+	+
<i>Ulmus minor</i>	+	+
<i>Viburnum opulus</i>	+	+
< 0.5 m									
<i>Acer campestre</i>	1	.	.	.	.	.	.	+	.
<i>Acer negundo</i>	+	.
<i>Acer platanoides</i>	+	+	.	.	.	+	+	+	.
<i>Acer pseudoplatanus</i>	+	.	.	.
<i>Alnus glutinosa</i>	+
<i>Crataegus sp.</i>	+
<i>Euonymus europaea</i>	.	+	.	.	.	+	.	+	+
<i>Fraxinus excelsior</i>	+	.	+	.
<i>Humulus lupulus</i>	+	+	+	.	.	.	+	.	+
<i>Padus avium</i>	.	+	+	.
<i>Quercus robur</i>	+	.	.	.
<i>Ribes nigrum</i>	+	+	1
<i>Ulmus glabra</i>	+	.
<i>Ulmus minor</i>	+
<i>Viburnum opulus</i>	+	+

1 – Onyshchenko V.A. (11.05.2003+30.05.2003), Kyiv, Holosiyivsky forest;

2 – Onyshchenko V.A. (09.09.2003+04.2004), Kyiv, Holosiyivsky forest;

3 – Yuglichek L.S. (02.05.2001+04.07.2001), Kholmynsky Region, Shepetivka District, Klymentovyske forestry, sq. 62;

4 – Yuglichek L.S., Kholmynsky Region, Iziaslav District, Liutarske forestry, sq. 37;

5 – Yuglichek L.S. (15.04.2001+19.04.2001), Kholmynsky Region, Shepetivka District, Klymentovyske forestry, sq. 90;

6 – Onyshchenko V.A. (19.04.1997+11.06.1997) + Onyshchenko V.A., Panchenko S.M. (05.09.1997), Ternopil Region, Husiatyn District, Medobory Nature Reserve, Horodnytske forestry, sq. 3;

7 – Panchenko S.M. (27.04.1998+summer 1998), Sumy Region, Seredyna-Buda District, Desniansko-Starohutsky National Nature Park, sq. 39;

8 – Onyshchenko V.A. (05.09.2003+02.05.2004), Vinnytsia Region, Koziatyn District, botanical reserve “Sestrynivska Dacha”;

9 – Onyshchenko V.A. (04.05.2005), Kyiv Region, Bila Tserkva District, floodplain of the Ros’.

Table 74. *Aceri tatarici-Alnetum glutinosae* ass. nov. prov.

Number in table	1	2	3	4	5	6	7	8	9
Exposition	-	-	-	-	-	-	-	-	-
Inclination	0	0	0	0	0	0	0	0	0
Tree layer	65	70	70	75	65	65	60	80	80
Shrub layer	20	40	40	15	30	20	50	25	7
Herb layer in summer relevé	6	15	15	45	95	55	95	80	90
Herb layer in spring relevé	3	5	8	70	75	45	70	75	72
Mosses	0	0	0	0	0	0	0	5	5
Area (sq. m)	200	300	400	200	400	400	400	400	400
Number of vascular plants species	18	18	22	32	50	20	32	27	22

D *Aceri tatarici-Alnetum* versus

Fraxino-Alntum

<i>Acer tataricum</i>	+	3	3	+	.	+	+	+	1
<i>Crataegus curvisepala</i>	+	+	+	2	+	.	.	+	2
<i>Pyrus communis</i>	+	+	+	1	1	.	+	.	.

Ch, D *Alnenion glutinoso-incanae*, *Alnetea glutinosae*

<i>Alnus glutinosa</i>	5	5	5	5	5	5	5	5	5
<i>Cardamine amara</i>	.	.	.	.	+	.	.	+	+
<i>Carex elongata</i>	1	1	1	1	1	2	+	+	+
<i>Frangula alnus</i>	3	3	1	.	.	2	+	.	.
<i>Lycopus europaeus</i>	.	.	.	.	1	.	.	.	.
<i>Lysimachia vulgaris</i>	+	+	1	1	2	1	+	+	.
<i>Scutellaria galericulata</i>	.	.	.	.	+	.	+	.	.

Ch, D *Alnion incanae*

<i>Circaea lutetiana</i>	.	.	.	.	+	.	.	1	+
<i>Festuca gigantea</i>	.	.	.	.	1	.	.	.	.
<i>Padus avium</i>	.	.	.	.	.	+	+	.	+
<i>Ranunculus repens</i>	.	.	.	.	+	.	.	.	.

Ch *Fagetalis sylvaticae*

<i>Adoxa moschatellina</i>	.	.	.	+	+	.	+	+	+
<i>Anemone ranunculoides</i>	.	.	.	1	1	.	+	+	+
<i>Asarum europaeum</i>	.	.	.	.	.	.	+	+	+
<i>Corydalis solida</i>	.	.	.	+	+	.	.	.	.
<i>Ficaria verna</i>	.	.	.	+	2	.	1	1	1
<i>Impatiens noli-tangere</i>	.	.	.	1	.	.	.	+	1
<i>Milium effusum</i>	.	+	+	.	.	.	.	1	1
<i>Polygonatum multiflorum</i>	.	.	.	+	.	.	.	+	+
<i>Ranunculus cassubicus</i>	.	.	.	.	+	.	.	.	.
<i>Scrophularia nodosa</i>	.	.	.	+	+	.	.	.	.

Ch *Querco-Fagetea* s.l.

<i>Aegopodium podagraria</i>	.	.	.	.	+	.	1	1	1
<i>Brachypodium sylvaticum</i>	.	.	.	.	+	+	.	+	.
<i>Euonymus europaea</i>	.	.	.	.	+	.	.	.	.
<i>Fraxinus excelsior</i>	+	.	.	.
<i>Poa nemoralis</i>	+	+	+	.	2	.	+	.	.

Ch *Phragmito-Magnocaricetea*

<i>Carex acutiformis</i>	2
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Ch *Molinietalia*

<i>Juncus effusus</i>	+	.	.	.	+
<i>Lythrum salicaria</i>	+	.
<i>Scirpus sylvaticus</i>	+	.	.

Other species

<i>Acer negundo</i>	.	.	.	+	.	+	4	.	.
<i>Agrostis capillaris</i>	+	.	.	.	.	+	.	.	.

Number in table	1	2	3	4	5	6	7	8	9
Athyrium filix-femina	.	.	.	.	2	.	2	5	5
Betula pendula	+	+	2	.	+	+	.	.	.
Calystegia sepium	.	.	.	+	1	.	.	.	.
Carex cinerea	.	.	.	.	+	.	.	.	.
Carex pallescens	.	+	+	.	.	2	.	.	.
Chelidonium majus	1	+	+	2	.	.	+	.	.
Convallaria majalis	1	.	+	.	.	.	.	.	.
Dactylis glomerata	.	.	.	.	1	.	.	+	.
Dryopteris carthusiana	.	.	2	+	1	2	.	.	.
Fallopia dumetorum	+	.	+	.	.	.	1	.	.
Filipendula ulmaria	.	.	.	.	2	.	1	.	.
Galeopsis bifida	.	.	.	.	.	.	2	.	.
Galium aparine	.	.	.	+	+	.	2	.	.
Geranium robertianum	.	.	.	+	+	.	.	+	+
Geum urbanum	.	.	.	+	+	.	+	+	+
Glechoma hederacea	.	.	.	.	2	.	2	1	1
Humulus lupulus	1	1	1	+	+	+	3	.	.
Lysimachia nummularia	.	+	.	.	2	.	.	.	.
Mentha sp.	.	.	.	.	+	.	.	.	.
Moehringia trinervia	.	+	.	+	+	.	1	.	.
Myosoton aquaticum	.	.	.	+	+	.	2	.	.
Persicaria hydropiper	.	.	.	.	+	.	.	.	.
Pinus sylvestris	+	.	1	.	.	+	.	.	.
Poa sylvicola	.	.	.	.	+	.	.	.	.
Populus tremula	.	.	2	.	.	.	.	.	.
Pteridium aquilinum	.	.	.	.	.	3	.	.	.
Quercus robur	+	+	+	+	+	.	.	.	.
Robinia pseudoacacia	.	.	.	.	.	.	3	.	.
Rosa sp.	.	.	+	+	+	.	.	.	.
Rubus caesius	.	2	1	1	2	4	2	1	.
Sambucus racemosa	.	.	+	.	+	.	.	.	.
Scilla siberica	.	.	.	.	+	.	.	+	.
Stellaria holostea	.	.	.	4	3	1	4	2	2
Ulmus laevis	+	+	.	.	3	+	+	3	2
Ulmus minor	.	.	.	2	.	.	.	.	.
Urtica dioica	.	.	.	1	1	+	3	.	+
Veronica chamaedrys	.	.	.	+	+	.	.	.	.
Veronica hederifolia	.	.	.	2	.	.	.	.	.
Viola odorata	.	.	.	1	.	.	.	+	.
Distribution of trees, shrubs and lianas by height									
> 5.0 m									
Alnus glutinosa	5	5	5	5	5	5	5	5	5
Betula pendula	.	+	+	.	+	+	.	.	.
Pinus sylvestris	.	.	1	.	.	+	.	.	.
Populus tremula	.	.	+	.	.	.	.	.	.
Pyrus communis	.	.	.	+	.	.	+	.	.
Ulmus laevis	.	.	.	.	+	.	+	1	2
Ulmus minor	.	.	.	+	.	.	.	.	.
0.5-5.0 m									
Acer negundo	.	.	.	+	.	+	4	.	.
Acer tataricum	+	3	2	.	.	+	+	.	1
Alnus glutinosa	1	+	1	.	3	2	+	2	.
Betula pendula	+	+	2	.	.	+	.	.	.
Crataegus curvisepala	.	+	.	2	+	.	.	+	2
Frangula alnus	3	3	1	.	.	2	+	.	.
Fraxinus excelsior	.	.	.	.	.	+	.	.	.
Padus avium	.	.	.	.	.	+	+	.	+
Populus tremula	.	.	+	.	.	.	.	.	.
Pyrus communis	+	+	+	1	1	.	.	.	.
Quercus robur	+	+	+	.	.	.	.	.	.
Robinia pseudoacacia	.	.	.	.	.	.	3	.	.
Rosa sp.	.	.	+	.	.	.	.	.	.
Sambucus racemosa	.	.	+	.	+	.	.	.	.
Ulmus laevis	+	+	.	.	+	+	.	3	1
Ulmus minor	.	.	.	2	.	.	.	.	.
< 0.5 m									
Acer negundo	.	.	.	+	.	.	+	.	.

Number in table	1	2	3	4	5	6	7	8	9
<i>Acer tataricum</i>	+	1	1	+	.	+	.	+	.
<i>Alnus glutinosa</i>	+	+	1	.	.	.	.	.	.
<i>Crataegus curvisepala</i>	+	+	+	+	+	.	.	+	.
<i>Euonymus europaea</i>	.	.	.	.	+	.	.	.	.
<i>Frangula alnus</i>	+	+	1	.	.	+	.	.	.
<i>Humulus lupulus</i>	1	1	1	+	+	+	3	.	.
<i>Pinus sylvestris</i>	+	.	+	.	.	.	.	.	.
<i>Populus tremula</i>	.	.	2	.	.	.	.	.	.
<i>Pyrus communis</i>	.	.	.	+	.	.	.	.	.
<i>Quercus robur</i>	.	.	+	+	+	.	.	.	.
<i>Robinia pseudoacacia</i>	.	.	.	.	.	.	+	.	.
<i>Rosa</i> sp.	.	.	.	+	+	.	.	.	.
<i>Rubus caesius</i>	.	2	1	1	2	4	2	1	.
<i>Ulmus laevis</i>	.	.	.	.	3	.	.	.	+
<i>Ulmus minor</i>	.	.	.	+	.	.	.	.	.

Author: Dyakova O.V.

Location: Donetsk Region, Slovyansk District, Sviati Hory National Nature Park

- 1 – 17.05.2007+ 08.08.2007, Sviatohirske forestry, sq. 140;
 2 – 17.05.2007+ 08.08.2007, Sviatohirske forestry, sq. 109;
 3 – 17.05.2007+ 08.08.2007, Sviatohirske forestry, sq. 109;
 4 – 17.05.2007+ 07.08.2007, Sviatohirske forestry, sq. 109;
 5 – 17.05.2007+ 07.08.2007, Sviatohirske forestry, sq. 24;
 6 – 22.05.2007+ 22.08.2007, Sviatohirske forestry, sq. 63;
 7 – 22.05.2007+ 22.08.2007, Sviatohirske forestry, sq. 20;
 8 – 22.05.2007+ 07.08.2007, Sviatohirske forestry, sq. 85;
 9 – 22.05.2007+ 07.08.2007, Sviatohirske forestry, sq. 85.

Table 75. *Fraxino pannonicae-Ulmetum* Soó 1960

Number in table	1	2	3	4	5	6
Tree layer	0,7	0,3	0,2	0,8	0,7	0,2
Shrub layer	0,1	0,1	0,1	0,2	0,2	0,1
Herb layer in summer	50	80	70	80	75	45
Area (sq. m)	100	100	600	400	400	100
Number of vascular plants species	11	33	55	17	16	13

Ch, D *Fraxino pannonicae-Ulmetum*

<i>Fraxinus angustifolia</i>	4	2	2	5	5	1
<i>Carex strigosa</i>	2	2	1	+	1	1

Ch, D *Alnion incanae*

<i>Caltha palustris</i>	.	.	1	2	.	.
<i>Carex elongata</i>	.	.	.	.	2	.
<i>Carex remota</i>	+	1	+	1	1	.
<i>Circaea lutetiana</i>	.	1	.	.	.	.
<i>Filipendula ulmaria</i>	.	2	.	2	1	.
<i>Ranunculus repens</i>	.	1	2	.	.	.
<i>Stellaria nemorum</i>	.	1	1	.	.	.

Ch *Fagetalia sylvaticae*

<i>Carex sylvatica</i>	.	2	+	.	.	+
<i>Impatiens noli-tangere</i>	.	.	3	1	.	4
<i>Milium effusum</i>	.	+	.	.	.	.
<i>Scrophularia nodosa</i>	.	.	1	.	.	.
<i>Stachys sylvatica</i>	.	.	+	.	.	1

Other species

<i>Acer campestre</i>	2	.	.	1	.	.
<i>Acer negundo</i>	.	.	.	.	1	.
<i>Aegopodium podagraria</i>	.	.	1	.	1	.
<i>Alisma plantago-aquatica</i>	.	.	1	.	.	.
<i>Alliaria petiolata</i>	.	.	+	.	.	.
<i>Alopecurus aequalis</i>	.	.	1	.	.	.
<i>Artemisia vulgaris</i>	.	.	1	.	.	.

Number in table	1	2	3	4	5	6
Barbarea vulgaris	.	.	+	.	.	.
Bidens frondosa	.	2	.	.	.	.
Bidens tripartita	.	.	+	.	.	.
Carex riparia	.	1	.	.	.	.
Carpinus betulus	.	+	2	.	.	1
Cirsium arvense	.	.	1	.	.	.
Coronaria flos-cuculi	.	.	+	.	.	.
Corylus avellana	.	.	2	.	.	.
Cystopteris fragilis	.	.	+	.	.	.
Dactylis glomerata	.	2	.	.	.	.
Dactylis polygama	.	.	1	.	.	.
Euonymus europaea	.	.	+	.	.	.
Galeopsis speciosa	.	.	1	.	.	.
Galium aparine	.	.	1	.	1	.
Galium palustre	.	.	1	.	.	.
Geranium robertianum	.	.	+	.	.	1
Geranium sylvaticum	.	.	1	.	.	.
Geum urbanum	.	.	.	1	.	.
Glechoma hederacea	2	1	+	3	.	1
Glyceria fluitans	.	.	1	.	.	.
Hypericum tetrapterum	.	.	1	.	.	.
Iris pseudacorus	.	.	1	+	1	.
Juncus effusus	.	1	1	.	.	.
Juncus tenuis	.	+
Leersia oryzoides	.	1	.	.	.	.
Leucojum aestivum	.	.	.	1	1	.
Lycopus europaeus	.	1	1	.	.	.
Lysimachia nummularia	.	.	1	.	.	.
Lysimachia vulgaris	.	1	1	.	.	.
Lythrum salicaria	.	1	.	.	.	.
Matricaria perforata	.	.	+	.	.	.
Mycelis muralis	.	.	1	.	.	.
Myosotis nemorosa	.	.	+	.	.	.
Myosotis palustris	.	.	.	1	1	.
Myosotis sylvatica	.	.	1	.	.	.
Myosoton aquaticum	.	.	+	.	.	.
Phalacrolooma annuum	.	+	1	.	.	1
Phalaroides arundinacea	1	1	3	1	.	.
Plantago major	.	.	1	.	.	.
Persicaria hydropiper	.	1	1	.	.	.
Prunella vulgaris	.	1	.	.	.	.
Quercus robur	2	3	2	.	1	1
Rorippa sylvestris	.	.	1	.	.	.
Rubus caesius	4	3	1	4	4	.
Rumex conglomeratus	.	.	1	.	.	.
Selinum carvifolia	.	.	1	1	2	+
Senecio jacobaea	.	+
Stachys palustris	.	+
Swida sanguinea	+	1	.	1	.	.
Taraxacum officinale	.	.	+	.	.	.
Tilia cordata	1	.
Ulmus laevis	.	1	+	.	.	.
Ulmus minor	2	2	.	.	.	+
Urtica dioica	1	3	1	3	3	3
Xanthoxalis fontana	.	1	1	.	.	.
Distribution of trees and shrubs by height						
Layer I						
Acer campestre	2	.	.	1	.	.
Carpinus betulus	.	+	1	.	.	1
Fraxinus angustifolia	4	1	1	4	5	1
Quercus robur	2	3	2	.	1	1
Tilia cordata	1	.
Ulmus laevis	.	1	+	.	.	.
Layer II						
Fraxinus angustifolia	1	.	.	3	1	+
Ulmus minor	2	.	.	.	.	.

Number in table	1	2	3	4	5	6
Layer III						
<i>Corylus avellana</i>	.	.	2	.	.	.
<i>Euonymus europaea</i>	.	.	+	.	.	.
<i>Fraxinus angustifolia</i>	.	.	.	2	.	.
<i>Swida sanguinea</i>	+	.	.	1	.	.
<i>Ulmus minor</i>	.	2	.	.	.	+
Layer IV						
<i>Acer negundo</i>	1	.
<i>Carpinus betulus</i>	.	.	1	.	.	.
<i>Corylus avellana</i>	.	.	1	.	.	.
<i>Euonymus europaea</i>	.	.	+	.	.	.
<i>Fraxinus angustifolia</i>	.	1	1	.	1	.
<i>Rubus caesius</i>	4	2	1	4	4	.
<i>Swida sanguinea</i>	.	1	.	.	.	.
<i>Tilia cordata</i>	+	.

Source of data: Danylyk & Kish 2008 (rel. 1-5,7).

No data on spring ephemerals.

1 – 29.08.2003, Berehove District, Otok forest;

2 – 20.08.2004, Mukachevo District, Kozuptovo forest;

3 – 11.06.2003, Mukachevo District, Ostrosh forest;

4 – 05.06.2004, Berehove District, Otok forest;

5 – 16.06.2004, Berehove District, Otok forest;

6 – 13.06.2003, Mukachevo District, Ostrosh forest.

Table 76. *Ornithogalo pontici*-*Alnetum* Didukh 1996

Number in table	1	2	3	4	5	6	7	8	9	10
Altitude	~500	550	~600	~600	~600	~500	~500	560	~700	~500
Tree layer	80	80	90	90	80	80	90	100	90	90
Shrub layer	10	10	50	70	60	40	50	40	50	50
Herb layer	80	100	80	60	70	80	90	95	95	90
Number of species of vascular plants	30	36	33	21	36	28	27	24	29	35
Nomenclatural type of association								*		
Nomenclatural types of subassociations		*						*		
Syntaxon	1					2				

D subass. clematietosum vitalbae

<i>Clematis vitalba</i>	+	+	+	.	+	.	.	.	.	.
<i>Geranium purpureum</i>	+	+	+	.	+	.	.	.	.	+
<i>Sambucus nigra</i>	+	+	.	4	+	.	.	.	+	.
<i>Lamium maculatum</i>	+	+	+	.	+	.	.	.	.	.
<i>Conium maculatum</i>	+	.	+	+	.	.	.	.	.	.
<i>Mentha longifolia</i>	.	.	.	+	+	.	.	.	.	.

D subass. ornithogaletosum pontici

<i>Heracleum sibiricum</i>	+	.	.	.	.	+	+	+	+	.
<i>Corylus avellana</i>	+	.	.	.	.	4	3	4	4	4
<i>Mercurialis perennis</i>	.	.	.	.	.	.	3	5	4	4
<i>Ornithogalum ponticum</i>	.	.	.	.	.	+	+	+	.	+

D Ornithogalo pontici-Alnetum

<i>Arum elongatum</i>	+	+	+	.	+	+	+	+	+	+
<i>Bupleurum rotundifolium</i>	+	+	+	.	+	.	+	+	+	+
<i>Colchicum umbrosum</i>	+	+	.	.	.	+	+	+	+	.
<i>Dentaria quinquefolia</i>	.	+	+	+	+	+	+	+	+	+
<i>Galanthus plicatus</i>	.	+	+	+	+	+	.	+	+	+
<i>Ranunculus constantinopolitanus</i>	.	+	+	+	+	+
<i>Viola dehnhardtii</i>	+	+	+	.	2	+	2	.	.	+

Ch, D Alnion incanae

<i>Alnus glutinosa</i>	5	5	5	5	5	5	5	5	4	4
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Ch Fagetalia sylvaticae

<i>Corydalis marschalliana</i>	+
<i>Euphorbia amygdaloides</i>	+
<i>Ficaria verna</i>	.	.	.	+	+	+	+	+	+	+
<i>Galium odoratum</i>	.	.	.	.	.	.	+	.	+	+

Number in table	1	2	3	4	5	6	7	8	9	10
<i>Pulmonaria obscura</i>	.	.	+	.	+	+	.	+	.	+
<i>Sanicula europaea</i>	.	.	.	.	+	.	.	.	.	.
<i>Stachys sylvatica</i>	.	+	+	.	+	+	.	.	+	+
<i>Ulmus glabra</i>	+	+	+	.	+	.	+	+	.	+
Other species										
<i>Acer campestre</i>	.	+	+	.	+	.	.	.	+	+
<i>Aegonychon purpureocaeruleum</i>	.	.	.	.	.	+	.	.	.	.
<i>Alliaria petiolata</i>	.	+	.	.	+	+	.	.	.	.
<i>Anthriscus sylvestris</i>	+	5	+	+	+	+	+	+	+	+
<i>Arctium nemorosum</i>	+	+	+	+	+	.	.	.	+	+
<i>Berberis vulgaris</i>	.	+	.	.	+	.	.	.	.	.
<i>Brachypodium sylvaticum</i>	.	.	+	.	.	+	+	.	.	.
<i>Bromopsis benekenii</i>	+	+	3	+	+	+	+	.	.	+
<i>Cerasus avium</i>	+	+	.	.	.	.	+	.	+	.
<i>Cornus mas</i>	.	.	+	.	4	+	4	3	+	.
<i>Crataegus curvisepala</i>	+	+	+	.	+	.	.	+	+	.
<i>Equisetum telmateia</i>	.	+	.	+	.	.	.	.	.	+
<i>Euonymus europaea</i>	.	.	.	.	+	.	+	.	+	+
<i>Euonymus latifolia</i>	+	+	+	.	.	+	.	+	.	.
<i>Euonymus verrucosa</i>	.	+	.	.	.	.	.	+	.	.
<i>Fraxinus excelsior</i>	.	+	.	.	+	.	.	+	.	+
<i>Galium aparine</i>	+	+	+	.	+	+	+	+	+	.
<i>Geum urbanum</i>	+	+	+	.	.	.	.	+	+	+
<i>Glechoma hederacea</i>	.	.	+	.	.	+	.	.	.	+
<i>Hedera helix</i>	.	.	.	.	.	.	.	.	+	.
<i>Humulus lupulus</i>	+	+	.	.	.	.	.	.	.	.
<i>Lapsana communis</i>	.	+	+	+	.	.	.	.	+	.
<i>Lathraea squamaria</i>	.	.	.	.	+	.	.	.	.	.
<i>Ligustrum vulgare</i>	.	+	+	.	+	+	+	+	.	.
<i>Listera ovata</i>	.	.	.	.	.	.	.	.	.	+
<i>Orchis mascula</i>	.	.	.	.	.	.	.	+	.	.
<i>Physalis alkekengi</i>	.	.	.	+	.	.	.	.	.	.
<i>Physospermum cornubiense</i>	.	.	.	.	.	+	+	.	.	.
<i>Platanthera chlorantha</i>	.	.	.	.	.	.	.	.	.	+
<i>Poa nemoralis</i>	+	+	.	+	.	.	.	.	.	.
<i>Polygonatum hirtum</i>	.	.	.	.	+	3	+	.	+	.
<i>Populus tremula</i>	.	.	.	.	.	.	+	.	.	.
<i>Potentilla micrantha</i>	+	.	.	.	.	.	.	.	.	.
<i>Primula acaulis</i>	+	.	+	+	+	+	+	+	.	+
<i>Pyrus communis</i>	.	+	.	.	.	.	.	.	.	.
<i>Rosa canina</i>	+	.	.	+	.	.	.	.	.	.
<i>Rubus caesius</i>	+	.	+	.	+	+	.	.	.	+
<i>Sambucus ebulus</i>	.	.	.	+	.	.	.	.	+	.
<i>Scutellaria altissima</i>	.	.	+	.	.	+	.	.	+	+
<i>Swida sanguinea</i>	+	+	3	+	+	.	.	.	+	+
<i>Taraxacum officinale</i>	+	+	+	+	.	.	+	.	.	.
<i>Tilia begoniifolia</i>	.	.	.	.	.	.	.	.	.	+
<i>Urtica dioica</i>	4	5	3	+	+	+	.	.	+	+
<i>Viola mirabilis</i>	.	.	.	.	+	.	+	.	.	.

No data on spring ephemerals.

Syntaxa: 1 - *Ornithogalo pontici*-*Alnetum clematietosum vitalbae*, 2 - *Ornithogalo pontici*-*Alnetum ornithogaletosum pontici*.

Rel. 2 (nomenclatural type of subass. *Ornithogalo pontici*-*Alnetum clematietosum vitalbae*) is made by Ya.P. Didukh, 12.07.1982, valley of the Kaspan near Lesnikove village of Bakhchysarai District.

Rel. 8 (nomenclatural type of the association and subass. *Ornithogalo pontici*-*Alnetum ornithogaletosum pontici*) is made by L.P. Vakarenko 13.07.1982 in the valley of the Kaspan near Lesnikove village of Bakhchysarai District.

Наукове видання

ОНИЩЕНКО Віктор Алімович

**ЛІСИ ПОРЯДКУ FAGETALIA SYLVATICAE
В УКРАЇНІ**

*Під редакцією
д-ра біол. наук, проф. С.Л. Мосякіна*

Головний редактор *Л.В. Фурта*

Підписано до друку 6.10.09. Формат 60x84/8. Папір офс. Гарнітура Times. Друк офсетний.
Ум. друк. арк. 26,65. Обл.-вид. арк. 27,2. Наклад 300 прим. Замовлення №09-31

«Альтерпрес», 01025 Київ, вул. В. Житомирська, 28. Свідоцтво серія ДК №177 від 15.09.2000 р.

Надруковано в ТОВ «Альтерпрес», 04112 Київ, вул. Шамрила, 23