

This is an extract from the following report:

Review of grassland habitats and development of distribution maps of heathland, scrub and tundra habitats of EUNIS habitats classification

Report EEA/NSV/15/005

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4 Description and distribution of the revised EUNIS heathland, scrub and tundra habitat types

4.3 Update of indicator species of the revised EUNIS woodland habitat types

The new approach developed here to define indicator species of heathland, scrub and tundra habitats was also applied to woodlands. The expert system for EUNIS woodland habitats developed in a previous report (Schaminée et al. 2014) was refined, using the updated species groups and new software functions developed for the work on heathlands/scrub/tundra. Based on this, refined classification of woodlands was prepared and diagnostic, constant and dominant species were also computed for woodlands. This new species list represents a substantial improvement of the species list for woodlands developed by Schaminée et al. (2013) and can replace it.

The stratified dataset for woodland habitat types contained 37,988 plots belonging to the types of group G and 253,405 plots belonging to other habitat types. The stratified dataset for coastal woodlands contained 559 plots belonging to these habitat types and 242,571 plots belonging to other types.

The resulting lists of indicator species for EUNIS woodland habitat types, including diagnostic, constant and dominant species, are presented in Appendix D. After excluding a few habitat types for which no or less than 10 vegetation plots were available, indicator species were defined for the following 40 woodland habitat types:

B1.7a	Atlantic and Baltic broad-leaved coastal dune woodland
B1.7c	Baltic coniferous coastal dune woodland
B1.7d	Mediterranean coniferous coastal dune woodland
G1.1	Temperate and boreal softwood riparian woodland
G1.2a	Alnus woodland on riparian and mineral soils
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G1.3	Mediterranean and Macaronesian riparian woodland
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G1.6a	Fagus woodland on non-acid soils
G1.6b	Fagus woodland on acid soils
G1.7a	Temperate and submediterranean thermophilous deciduous woodland
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G1.8	Acidophilous Quercus woodland
G1.9a	Boreal-nemoral mountain Betula and Populus tremula woodland on mineral soils
G1.9b	Mediterranean mountain Betula and Populus tremula woodland on mineral soils
G1.Aa	Carpinus and Quercus mesic deciduous woodland
G1.Ab	Ravine woodland
G1.Ba	Alnus cordata woodland
G2.1	Mediterranean evergreen Quercus woodland
G2.2	Mainland laurophyllous woodland
G2.3	Macaronesian laurophyllous woodland
G2.5a	South-Aegean Phoenix grove
G2.6	Ilex aquifolium woodland
G3.1a	Temperate mountain Picea woodland
G3.1b	Temperate mountain Abies woodland
G3.1c	Mediterranean mountain Abies woodland
G3.2-3	Temperate subalpine Larix, Pinus cembra and Pinus uncinata woodland
G3.4a	Temperate and continental Pinus sylvestris woodland
G3.4b	Temperate and submediterranean montane Pinus sylvestris-nigra woodland
G3.4c	Mediterranean montane Pinus sylvestris-nigra woodland
G3.6	Mediterranean and Balkan subalpine Pinus heldreichii-peuce woodland
G3.7	Mediterranean lowland to submontane Pinus woodland
G3.9a	Taxus baccata woodland
G3.9b	Mediterranean Cupressaceae woodland
G3.A	Picea taiga woodland
G3.B	Pinus sylvestris taiga woodland
G3.C	Larix sibirica taiga woodland
G3.Da	Pinus bog woodland
G3.Db	Picea bog woodland

In contrast, due to lack of data, indicator species could not be defined for the following 13 habitat types:

B1.7b	Black Sea broad-leaved coastal dune woodland
G1.C	Highly artificial broadleaved deciduous forestry plantations
G1.D	Fruit and nut tree orchards
G2.4	Olea europaea-Ceratonia siliqua woodland
G2.5b	Canarian Phoenix grove
G2.7	Macaronesian heathy woodland
G2.8	Highly artificial broadleaved evergreen forestry plantations
G2.9	Evergreen orchards and groves
G3.4d	Mediterranean montane Cedrus woodland

G3.8	Pinus canariensis woodland
G3.9c	Macaronesian Juniperus woodland
G3.Dc	Larix sibirica bog woodland
G3.F	Highly artificial coniferous plantations

Appendix D: Revised lists of indicator species of the revised EUNIS woodland habitat types

B1.7a - Atlantic and Baltic broad-leaved coastal dune woodland

*Diagnostic species (phi coefficient * 100)*

Cynoglossum officinale	48.0	Senecio sylvaticus	38.0
Lonicera periclymenum	37.6	Aulacomnium androgynum	37.6
Moehringia trinervia	37.0	Carex arenaria	36.1
Rubus caesius	36.0	Calamagrostis epigejos	33.4
Bryonia cretica	32.0	Brachythecium rutabulum	31.5
Kindbergia praelonga	30.9	Quercus robur	29.0
Lophocolea heterophylla	28.9	Rosa rubiginosa	27.6
Crataegus monogyna	27.0	Ligustrum vulgare	26.8
Rhynchosstegium megapolitanum	21.9	Euonymus europaeus	21.6
Plagiomnium affine	21.2	Pinus pinaster	21.0
Urtica dioica	20.8	Rosa canina agg.	20.6
Rosa pimpinellifolia	20.3	Bryum capillare	20.2
Cardamine hirsuta	19.7	Dicranum scoparium	19.6
Mnium hornum	19.5	Sambucus nigra	19.3
Hippophae rhamnoides	18.6	Prunus serotina	18.1
Ribes rubrum	17.9	Festuca filiformis	17.9
Geum urbanum	17.8	Hypnum cupressiforme	17.2
Hypnum jutlandicum	17.0	Rhamnus catharticus	16.4
Populus alba	16.4	Polypodium vulgare	16.2
Stellaria pallida	16.0	Senecio jacobaea	15.8
Veronica officinalis	15.5	Pseudoscleropodium purum	15.5
Polygonatum odoratum	15.4	Teucrium scorodonia	15.2
Arctium minus s.l.	15.2		

Constant species (occurrence frequencies)

Crataegus monogyna	72.0	Quercus robur	70.0
Urtica dioica	67.0	Rubus caesius	67.0
Lonicera periclymenum	66.0	Calamagrostis epigejos	64.0
Brachythecium rutabulum	60.0	Moehringia trinervia	54.0
Carex arenaria	50.0	Ligustrum vulgare	48.0
Poa pratensis	45.0	Kindbergia praelonga	43.0
Geum urbanum	40.0	Cynoglossum officinale	39.0
Dicranum scoparium	38.0	Rosa canina agg.	37.0
Hypnum cupressiforme	36.0	Euonymus europaeus	36.0
Sorbus aucuparia	33.0	Sambucus nigra	32.0
Galium aparine	32.0	Senecio jacobaea	31.0
Veronica officinalis	29.0	Senecio sylvaticus	28.0
Pseudoscleropodium purum	28.0	Plagiomnium affine	28.0
Luzula campestris	28.0	Geranium robertianum	28.0
Glechoma hederacea	24.0	Teucrium scorodonia	23.0

Polygonatum odoratum	23.0	Festuca rubra	23.0
Poa trivialis	22.0	Mnium hornum	22.0
Acer pseudoplatanus	22.0	Bryonia cretica	20.0
Agrostis capillaris	20.0	Polypodium vulgare	19.0
Lophocolea heterophylla	19.0	Aulacomnium androgynum	19.0
Solanum dulcamara	18.0	Rhamnus catharticus	18.0
Rosa rubiginosa	17.0	Hypnum jutlandicum	17.0
Holcus lanatus	17.0	Galium verum	16.0
Stellaria media	15.0	Silene dioica	15.0
Rosa pimpinellifolia	15.0	Hedera helix	15.0
Prunus serotina	14.0	Festuca filiformis	14.0
Cirsium vulgare	14.0	Betula pendula	14.0
Ajuga reptans	14.0	Viburnum opulus	13.0
Rubia peregrina	13.0	Pinus pinaster	13.0
Lophocolea bidentata	13.0	Dryopteris dilatata	13.0
Betula pubescens	13.0	Cardamine hirsuta	12.0
Bryum capillare	12.0	Taraxacum sect. Ruderalia	11.0
Ribes rubrum	11.0	Populus nigra	11.0
Polytrichastrum formosum	11.0	Hippophae rhamnoides	11.0
Galium mollugo	11.0	Berberis vulgaris	11.0
Alliaria petiolata	11.0	Ulex europaeus	10.0
Rubus fruticosus agg.	10.0	Fallopia convolvulus	10.0
Eupatorium cannabinum	10.0	Dryopteris filix-mas	10.0
Atrichum undulatum	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Quercus robur	51.0	Crataegus monogyna	15.0
Populus nigra	10.0	Quercus ilex	7.0
Calamagrostis epigejos	7.0	Quercus suber	6.0
Populus alba	6.0		

B1.7c - Baltic coniferous coastal dune woodland

*Diagnostic species (phi coefficient * 100)*

Dicranum undulatum	74.6	Empetrum nigrum	64.5
Goodyera repens	61.8	Carex arenaria	54.7
Listera cordata	51.4	Pleurozium schreberi	48.9
Pseudoscleropodium purum	47.0	Pinus sylvestris	42.8
Hylocomium splendens	42.5	Moneses uniflora	42.3
Vaccinium vitis-idaea	41.5	Melampyrum pratense	35.5
Dicranum scoparium	31.8	Deschampsia flexuosa	31.4
Cladonia chlorophaea	31.0	Cladonia portentosa	29.1
Cladonia arbuscula	27.9	Salix repens	27.8
Calluna vulgaris	27.8	Cladonia ciliata	27.4
Polypodium vulgare	27.3	Dicranum polysetum	26.6
Cladonia rangiferina	26.6	Ptilium crista-castrensis	25.7
Hypnum jutlandicum	25.4	Linnaea borealis	23.4

Betula pendula	23.0	Luzula pilosa	22.9
Trientalis europaea	22.6	Monotropa hypopitys	21.8
Peltigera polydactyla	21.4	Pyrola chlorantha	20.9
Luzula multiflora	20.6	Cladonia gracilis	20.5
Cladonia glauca	20.2	Hieracium umbellatum	19.7
Lycopodium annotinum	19.1	Brachythecium starkei	18.8
Viola tricolor subsp. maritima	18.5	Cladonia mitis	18.4
Quercus robur	17.9	Cladonia furcata	17.8
Lycopodium clavatum	17.6	Juncus balticus	17.6
Vaccinium myrtillus	17.5	Juniperus communis subsp. communis	17.5
Vaccinium uliginosum	16.2	Chimaphila umbellata	15.9
Sorbus aucuparia	15.4		

Constant species (occurrence frequencies)

Pinus sylvestris	100.0	Pleurozium schreberi	93.0
Pseudoscleropodium purum	87.0	Empetrum nigrum	81.0
Carex arenaria	81.0	Deschampsia flexuosa	80.0
Vaccinium vitis-idaea	74.0	Hylocomium splendens	72.0
Calluna vulgaris	71.0	Dicranum undulatum	65.0
Dicranum scoparium	61.0	Melampyrum pratense	56.0
Betula pendula	52.0	Goodyera repens	48.0
Vaccinium myrtillus	46.0	Quercus robur	45.0
Sorbus aucuparia	40.0	Luzula multiflora	36.0
Luzula pilosa	35.0	Polypodium vulgare	33.0
Listera cordata	32.0	Juniperus communis subsp. communis	32.0
Salix repens	30.0	Hieracium umbellatum	28.0
Hypnum jutlandicum	27.0	Cladonia arbuscula	27.0
Cladonia portentosa	25.0	Trientalis europaea	24.0
Frangula alnus	24.0	Anthoxanthum odoratum	24.0
Moneses uniflora	23.0	Maianthemum bifolium	23.0
Cladonia chlorophaea	23.0	Cladonia rangiferina	22.0
Dryopteris carthusiana	21.0	Vaccinium uliginosum	20.0
Dicranum polysetum	18.0	Picea abies	17.0
Rhytidiadelphus triquetrus	16.0	Ptilium crista-castrensis	15.0
Cladonia furcata	15.0	Cladonia gracilis	14.0
Linnaea borealis	13.0	Populus tremula	11.0
Orthilia secunda	11.0	Monotropa hypopitys	11.0
Lycopodium annotinum	11.0	Cladonia ciliata	11.0
Pohlia nutans	10.0	Erica tetralix	10.0
Cladonia mitis	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Pinus sylvestris	99.0	Pseudoscleropodium purum	58.0
Pleurozium schreberi	51.0	Empetrum nigrum	30.0
Deschampsia flexuosa	27.0	Calluna vulgaris	24.0
Vaccinium vitis-idaea	18.0	Hylocomium splendens	15.0

Vaccinium myrtillus	8.0	Carex arenaria	8.0
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B1.7d - Mediterranean coniferous coastal dune woodland

*Diagnostic species (phi coefficient * 100)*

Pinus halepensis	78.9	Asparagus acutifolius	57.9
Rosmarinus officinalis	57.1	Quercus coccifera	51.6
Rubia peregrina	49.8	Juniperus oxycedrus	49.3
Phillyrea angustifolia	48.9	Stachys dubia	48.8
Polygala rupestris	43.1	Daphne gnidium	42.9
Juniperus phoenicea	42.0	Carex hallerana	40.9
Cneorum tricoccon	40.0	Rhamnus alaternus	39.9
Brachypodium retusum	39.7	Smilax aspera	34.9
Lonicera implexa	34.4	Leuzea conifera	33.7
Ononis minutissima	33.4	Pistacia lentiscus	32.5
Fumana ericophylla	32.0	Cistus monspeliensis	31.7
Thymus vulgaris	29.9	Piptatherum miliaceum	29.7
Clematis flammula	29.4	Genista scorpius	29.1
Phillyrea latifolia	28.6	Bupleurum fruticosum	27.1
Prasium majus	26.0	Avenula bromoides	24.9
Aphyllanthes monspeliensis	24.6	Cistus incanus	23.7
Tamarix gallica	23.5	Aetheorhiza bulbosa	23.5
Pinus pinea	22.3	Argyrolobium zanonii	22.1
Ulex parviflorus	22.0	Asphodelus cerasiferus	21.4
Quercus ilex	20.2	Myoporum tenuifolium	20.1
Lavandula latifolia	20.0	Centranthus calcitrapae	19.8
Acacia cyanophylla	19.7	Myrtus communis	19.3
Helianthemum sessiliflorum	19.2	Acacia saligna	19.0
Ranunculus macrophyllus	18.4	Astragalus massiliensis	18.4
Quercus suber	18.1	Cistus salvifolius	16.7
Lavandula stoechas	16.6	Helianthemum guttatum	16.6
Helianthemum pilosum	16.4	Erica multiflora	16.3
Serapias vomeracea	15.6	Erica arborea	15.5
Globularia alypum	15.3	Geranium rotundifolium	15.1

Constant species (occurrence frequencies)

Pinus halepensis	88.0	Rubia peregrina	78.0
Asparagus acutifolius	76.0	Rosmarinus officinalis	59.0
Quercus coccifera	57.0	Juniperus oxycedrus	57.0
Brachypodium retusum	49.0	Phillyrea angustifolia	45.0
Carex hallerana	43.0	Stachys dubia	37.0
Smilax aspera	37.0	Daphne gnidium	37.0
Rhamnus alaternus	35.0	Pistacia lentiscus	35.0
Juniperus phoenicea	35.0	Thymus vulgaris	33.0
Lonicera implexa	29.0	Phillyrea latifolia	27.0
Cistus monspeliensis	24.0	Quercus ilex	22.0
Ononis minutissima	22.0	Hieracium pilosella	22.0

Genista scorpius	22.0	Fumana ericophylla	22.0
Clematis flammula	22.0	Polygala rupestris	20.0
Leuzea conifera	20.0	Aphyllanthes monspeliensis	20.0
Piptatherum miliaceum	18.0	Cneorum tricoccon	18.0
Cistus incanus	18.0	Avenula bromoides	18.0
Teucrium polium	16.0	Prasium majus	16.0
Eryngium campestre	16.0	Sanguisorba minor	14.0
Erica arborea	14.0	Cistus salvifolius	14.0
Argyrolobium zanonii	14.0	Aetheorhiza bulbosa	14.0
Ruscus aculeatus	12.0	Myrtus communis	12.0
Lavandula latifolia	12.0	Dorycnium pentaphyllum	12.0
Ulex parviflorus	10.0	Quercus suber	10.0
Lavandula stoechas	10.0	Festuca ovina	10.0
Bupleurum fruticosum	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Pinus halepensis	82.0	Juniperus oxycedrus	20.0
Brachypodium retusum	14.0	Rosmarinus officinalis	12.0
Stachelina dubia	10.0	Pinus pinea	8.0
Erica multiflora	8.0	Erica arborea	8.0
Asparagus acutifolius	8.0	Pistacia lentiscus	6.0

G1.1 - Temperate and boreal softwood riparian woodland

*Diagnostic species (phi coefficient * 100)*

Salix alba	53.1	Salix fragilis	37.5
Populus nigra	36.1	Populus alba	30.6
Rubus caesius	22.8	Humulus lupulus	22.3
Salix purpurea	20.5	Urtica dioica	20.1
Calystegia sepium	19.4	Salix triandra	19.1
Impatiens glandulifera	16.9	Symphytum officinale	16.7
Solanum dulcamara	16.5	Phalaris arundinacea	16.3
Salix viminalis	16.2	Galium aparine	16.1
Salix x rubens	15.1		

Constant species (occurrence frequencies)

Urtica dioica	69.0	Salix alba	57.0
Rubus caesius	44.0	Galium aparine	44.0
Phalaris arundinacea	34.0	Populus nigra	32.0
Glechoma hederacea	32.0	Poa trivialis	31.0
Calystegia sepium	31.0	Salix fragilis	30.0
Sambucus nigra	27.0	Humulus lupulus	27.0
Solanum dulcamara	26.0	Ranunculus repens	26.0
Cornus sanguinea	25.0	Symphytum officinale	24.0
Crataegus monogyna	22.0	Alnus glutinosa	22.0
Populus alba	21.0	Lycopus europaeus	20.0
Brachypodium sylvaticum	20.0	Aegopodium podagraria	20.0

Phragmites australis	18.0	Lythrum salicaria	18.0
Lysimachia vulgaris	18.0	Iris pseudacorus	18.0
Fraxinus excelsior	18.0	Salix purpurea	17.0
Geum urbanum	17.0	Angelica sylvestris	17.0
Agrostis stolonifera	17.0	Ulmus minor	15.0
Hedera helix	15.0	Filipendula ulmaria	15.0
Dactylis glomerata	15.0	Lysimachia nummularia	14.0
Lamium maculatum	14.0	Heracleum sphondylium	14.0
Euonymus europaeus	14.0	Anthriscus sylvestris	14.0
Alliaria petiolata	14.0	Rumex obtusifolius	13.0
Clematis vitalba	13.0	Salix triandra	12.0
Impatiens noli-tangere	12.0	Festuca gigantea	12.0
Stachys palustris	11.0	Ranunculus ficaria	11.0
Ligustrum vulgare	11.0	Galium palustre	11.0
Fraxinus angustifolia	11.0	Equisetum arvense	11.0
Stellaria media	10.0	Stachys sylvatica	10.0
Poa palustris	10.0	Myosoton aquaticum	10.0
Mentha aquatica	10.0	Impatiens glandulifera	10.0
Cirsium arvense	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Salix alba	45.0	Urtica dioica	23.0
Salix fragilis	21.0	Populus nigra	18.0
Populus alba	13.0	Rubus caesius	9.0
Phalaris arundinacea	6.0		

G1.2a - Alnus woodland on riparian and mineral soils

*Diagnostic species (phi coefficient * 100)*

Alnus glutinosa	42.9	Alnus incana	24.6
Carex remota	19.5	Stachys sylvatica	18.2
Impatiens noli-tangere	17.9	Festuca gigantea	16.8
Urtica dioica	16.5	Chrysosplenium alternifolium	16.4
Chaerophyllum hirsutum	15.9	Athyrium filix-femina	15.8
Cardamine amara	15.5	Fraxinus excelsior	15.1

Constant species (occurrence frequencies)

Alnus glutinosa	85.0	Urtica dioica	58.0
Fraxinus excelsior	47.0	Filipendula ulmaria	41.0
Athyrium filix-femina	40.0	Ranunculus repens	35.0
Deschampsia cespitosa	35.0	Geum urbanum	34.0
Stachys sylvatica	32.0	Galium aparine	30.0
Aegopodium podagraria	30.0	Lamium galeobdolon	29.0
Brachypodium sylvaticum	29.0	Sambucus nigra	28.0
Oxalis acetosella	28.0	Angelica sylvestris	28.0
Impatiens noli-tangere	27.0	Corylus avellana	26.0
Caltha palustris	26.0	Rubus idaeus	25.0

Poa trivialis	25.0	Geranium robertianum	24.0
Carex remota	24.0	Acer pseudoplatanus	24.0
Rubus fruticosus agg.	23.0	Plagiomnium undulatum	23.0
Glechoma hederacea	23.0	Circaea lutetiana	23.0
Festuca gigantea	22.0	Anemone nemorosa	22.0
Alnus incana	22.0	Ajuga reptans	22.0
Ranunculus ficaria	21.0	Lysimachia vulgaris	21.0
Chaerophyllum hirsutum	20.0	Crepis paludosa	19.0
Stellaria nemorum	18.0	Rubus caesius	18.0
Hedera helix	18.0	Cirsium oleraceum	18.0
Carex sylvatica	18.0	Galium palustre	17.0
Euonymus europaeus	17.0	Sorbus aucuparia	16.0
Senecio nemorensis	16.0	Prunus padus	16.0
Primula elatior	16.0	Dryopteris dilatata	16.0
Crataegus monogyna	16.0	Viburnum opulus	15.0
Solanum dulcamara	15.0	Poa nemoralis	15.0
Lycopus europaeus	15.0	Juncus effusus	15.0
Chrysosplenium alternifolium	15.0	Humulus lupulus	15.0
Equisetum arvense	15.0	Cornus sanguinea	15.0
Cardamine amara	15.0	Picea abies	14.0
Viola reichenbachiana	13.0	Silene dioica	13.0
Phalaris arundinacea	13.0	Lysimachia nummularia	13.0
Dryopteris filix-mas	13.0	Dryopteris carthusiana	13.0
Brachythecium rutabulum	13.0	Lysimachia nemorum	12.0
Lamium maculatum	12.0	Heracleum sphondylium	11.0
Geum rivale	11.0	Cirsium palustre	11.0
Asarum europaeum	11.0	Alliaria petiolata	11.0
Valeriana officinalis	10.0	Stellaria holostea	10.0
Scrophularia nodosa	10.0	Quercus robur	10.0
Moehringia trinervia	10.0	Milium effusum	10.0
Mercurialis perennis	10.0	Kindbergia praelonga	10.0
Iris pseudacorus	10.0	Galeopsis tetrahit	10.0
Fragaria vesca	10.0	Eupatorium cannabinum	10.0
Atrichum undulatum	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Alnus glutinosa	82.0	Alnus incana	17.0
Urtica dioica	9.0	Fraxinus excelsior	6.0
Ranunculus ficaria	5.0		

G1.2b - Temperate and boreal hardwood riparian woodland

*Diagnostic species (phi coefficient * 100)*

Ranunculus ficaria	33.0	Circaea lutetiana	33.0
Fraxinus excelsior	29.2	Geum urbanum	27.5
Stachys sylvatica	27.0	Prunus padus	26.3
Festuca gigantea	22.4	Euonymus europaeus	22.0

Carex sylvatica	20.2	Adoxa moschatellina	19.8
Rubus caesius	18.7	Rumex sanguineus	18.6
Plagiomnium undulatum	18.5	Glechoma hederacea	18.3
Anemone nemorosa	17.8	Carex remota	17.7
Ulmus minor	17.3	Alnus glutinosa	17.2
Quercus robur	17.1	Corylus avellana	17.0
Viburnum opulus	16.8	Paris quadrifolia	16.8
Eurhynchium striatum	16.8	Brachypodium sylvaticum	16.6
Urtica dioica	16.5	Deschampsia cespitosa	16.4
Aegopodium podagraria	16.4	Primula elatior	16.1
Ribes rubrum	15.8	Sambucus nigra	15.6
Arum maculatum	15.6	Milium effusum	15.5
Polygonatum multiflorum	15.4	Galium aparine	15.0

Constant species (occurrence frequencies)

Fraxinus excelsior	86.0	Geum urbanum	67.0
Urtica dioica	58.0	Circaea lutetiana	57.0
Corylus avellana	56.0	Ranunculus ficaria	55.0
Deschampsia cespitosa	54.0	Quercus robur	49.0
Stachys sylvatica	48.0	Glechoma hederacea	45.0
Brachypodium sylvaticum	45.0	Anemone nemorosa	45.0
Euonymus europaeus	43.0	Carex sylvatica	43.0
Hedera helix	42.0	Galium aparine	42.0
Lamium galeobdolon	38.0	Aegopodium podagraria	38.0
Rubus caesius	37.0	Crataegus monogyna	37.0
Alnus glutinosa	37.0	Filipendula ulmaria	36.0
Acer pseudoplatanus	36.0	Viola reichenbachiana	33.0
Sambucus nigra	32.0	Polygonatum multiflorum	32.0
Prunus padus	31.0	Plagiomnium undulatum	31.0
Geranium robertianum	31.0	Festuca gigantea	31.0
Cornus sanguinea	31.0	Milium effusum	30.0
Carpinus betulus	30.0	Paris quadrifolia	29.0
Viburnum opulus	28.0	Rubus fruticosus agg.	28.0
Oxalis acetosella	27.0	Athyrium filix-femina	27.0
Acer campestre	27.0	Stellaria holostea	25.0
Primula elatior	25.0	Ajuga reptans	25.0
Ulmus minor	24.0	Fagus sylvatica	24.0
Eurhynchium striatum	24.0	Poa trivialis	23.0
Carex remota	23.0	Kindbergia praelonga	22.0
Arum maculatum	22.0	Adoxa moschatellina	22.0
Poa nemoralis	21.0	Crataegus laevigata	21.0
Moehringia trinervia	20.0	Brachythecium rutabulum	19.0
Alliaria petiolata	19.0	Scrophularia nodosa	18.0
Rumex sanguineus	18.0	Ranunculus auricomus agg.	18.0
Galium odoratum	18.0	Dryopteris filix-mas	18.0
Atrichum undulatum	18.0	Rubus idaeus	17.0
Mercurialis perennis	17.0	Impatiens noli-tangere	17.0
Angelica sylvestris	17.0	Sorbus aucuparia	16.0

Ranunculus repens	16.0	Lonicera periclymenum	16.0
Lysimachia nummularia	15.0	Fissidens taxifolius	15.0
Veronica chamaedrys	14.0	Tilia cordata	13.0
Quercus petraea	13.0	Prunus spinosa	13.0
Prunus avium	13.0	Mnium hornum	13.0
Ligustrum vulgare	13.0	Heracleum sphondylium	13.0
Veronica montana	12.0	Thuidium tamariscinum	12.0
Pulmonaria officinalis	12.0	Humulus lupulus	12.0
Fragaria vesca	12.0	Dactylis glomerata	12.0
Cardamine pratensis	12.0	Valeriana officinalis	11.0
Ribes rubrum	11.0	Pulmonaria obscura	11.0
Lonicera xylosteum	11.0	Dryopteris dilatata	11.0
Crepis paludosa	11.0	Anemone ranunculoides	11.0
Acer platanoides	11.0	Viola riviniana	10.0
Ulmus glabra	10.0	Listera ovata	10.0
Lamium maculatum	10.0	Impatiens parviflora	10.0
Galeopsis tetrahit	10.0	Dryopteris carthusiana	10.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Fraxinus excelsior	71.0	Quercus robur	30.0
Ranunculus ficaria	22.0	Corylus avellana	15.0
Anemone nemorosa	13.0	Aegopodium podagraria	9.0
Hedera helix	8.0	Prunus padus	7.0
Lamium galeobdolon	7.0	Carpinus betulus	7.0
Urtica dioica	6.0	Ulmus minor	6.0
Rubus caesius	6.0	Mercurialis perennis	6.0
Alnus glutinosa	6.0	Acer pseudoplatanus	6.0

G1.3 - Mediterranean and Macaronesian riparian woodland

*Diagnostic species (phi coefficient * 100)*

Platanus orientalis	70.0	Rubus sanctus	34.2
Populus alba	34.2	Salix alba	31.4
Rubus ulmifolius	31.3	Populus nigra	29.1
Nerium oleander	26.5	Ficus carica	25.8
Arum italicum	25.8	Carex pendula	24.2
Vitex agnus-castus	21.4	Melissa officinalis	21.2
Clematis vitalba	21.1	Piptatherum miliaceum	20.4
Symphytum bulbosum	19.4	Dracunculus vulgaris	19.3
Scirpoides holoschoenus	19.2	Cirsium creticum subsp. creticum	18.7
Cercis siliquastrum	18.5	Brachypodium sylvaticum	18.5
Arundo donax	18.1	Salix amplexicaulis	17.8
Juglans regia	17.6	Ulmus minor	16.5
Fraxinus angustifolia	16.5	Cardamine graeca	16.0
Vitis vinifera subsp. sylvestris	15.8	Equisetum ramosissimum	15.1

Constant species (occurrence frequencies)

Platanus orientalis	52.0	Rubus ulmifolius	51.0
Brachypodium sylvaticum	50.0	Hedera helix	44.0
Clematis vitalba	36.0	Salix alba	33.0
Populus nigra	26.0	Populus alba	26.0
Galium aparine	26.0	Urtica dioica	24.0
Dactylis glomerata	24.0	Crataegus monogyna	24.0
Ulmus minor	23.0	Arum italicum	22.0
Cornus sanguinea	21.0	Carex pendula	20.0
Rubia peregrina	17.0	Alnus glutinosa	17.0
Pteridium aquilinum	16.0	Tamus communis	15.0
Scirpoides holoschoenus	15.0	Phragmites australis	15.0
Rubus sanctus	14.0	Prunella vulgaris	14.0
Poa trivialis	14.0	Sambucus nigra	13.0
Rubus caesius	13.0	Piptatherum miliaceum	13.0
Mycelis muralis	13.0	Humulus lupulus	13.0
Fraxinus angustifolia	13.0	Asparagus acutifolius	13.0
Rumex conglomeratus	12.0	Smilax aspera	11.0
Origanum vulgare	11.0	Nerium oleander	11.0
Ligustrum vulgare	11.0	Juglans regia	11.0
Geranium robertianum	11.0	Ficus carica	11.0
Equisetum telmateia	11.0	Equisetum arvense	11.0
Calystegia sepium	11.0	Rosa canina agg.	10.0
Quercus coccifera	10.0	Prunus spinosa	10.0
Clinopodium vulgare	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Platanus orientalis	48.0	Rubus ulmifolius	16.0
Populus alba	15.0	Salix alba	11.0
Populus nigra	9.0	Hedera helix	7.0

G1.4 - Broadleaved swamp woodland on non-acid peat

*Diagnostic species (phi coefficient * 100)*

Carex elongata	47.3	Alnus glutinosa	47.3
Solanum dulcamara	34.5	Thelypteris palustris	28.3
Carex acutiformis	28.0	Peucedanum palustre	27.7
Calamagrostis canescens	26.8	Lysimachia vulgaris	26.7
Lycopus europaeus	25.6	Iris pseudacorus	24.7
Ribes nigrum	24.3	Dryopteris carthusiana	23.6
Galium palustre	20.6	Mnium hornum	20.1
Carex paniculata	19.7	Scutellaria galericulata	19.6
Frangula alnus	19.5	Humulus lupulus	19.2
Carex pseudocyperus	17.4	Salix cinerea	16.8
Carex remota	16.8	Filipendula ulmaria	15.1

Constant species (occurrence frequencies)

Alnus glutinosa	100.0	Lysimachia vulgaris	65.0
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Solanum dulcamara	55.0	Galium palustre	53.0
Lycopus europaeus	49.0	Dryopteris carthusiana	48.0
Frangula alnus	45.0	Urtica dioica	43.0
Iris pseudacorus	42.0	Filipendula ulmaria	42.0
Carex acutiformis	41.0	Deschampsia cespitosa	40.0
Carex elongata	38.0	Athyrium filix-femina	37.0
Juncus effusus	34.0	Peucedanum palustre	33.0
Lythrum salicaria	32.0	Caltha palustris	32.0
Fraxinus excelsior	31.0	Calamagrostis canescens	31.0
Ranunculus repens	29.0	Sorbus aucuparia	28.0
Rubus fruticosus agg.	28.0	Scutellaria galericulata	27.0
Salix cinerea	27.0	Mnium hornum	27.0
Cirsium palustre	27.0	Rubus idaeus	26.0
Poa trivialis	26.0	Betula pubescens	26.0
Thelypteris palustris	25.0	Calliergonella cuspidata	25.0
Dryopteris dilatata	24.0	Phragmites australis	23.0
Humulus lupulus	23.0	Angelica sylvestris	23.0
Viburnum opulus	22.0	Carex remota	21.0
Brachythecium rutabulum	21.0	Plagiomnium undulatum	20.0
Mentha aquatica	20.0	Eupatorium cannabinum	20.0
Quercus robur	19.0	Galium aparine	19.0
Carex paniculata	19.0	Impatiens noli-tangere	18.0
Viola palustris	17.0	Prunus padus	17.0
Plagiomnium affine	16.0	Oxalis acetosella	16.0
Lonicera periclymenum	16.0	Kindbergia praelonga	16.0
Circaea lutetiana	16.0	Scirpus sylvaticus	15.0
Ribes nigrum	15.0	Myosotis scorpioides	15.0
Equisetum fluviatile	15.0	Cirsium oleraceum	15.0
Rubus caesius	14.0	Phalaris arundinacea	14.0
Crepis paludosa	14.0	Cardamine amara	14.0
Carex pseudocyperus	13.0	Carex elata	13.0
Cardamine pratensis	13.0	Glyceria fluitans	12.0
Geranium robertianum	12.0	Festuca gigantea	12.0
Equisetum palustre	12.0	Ajuga reptans	12.0
Valeriana officinalis	11.0	Lysimachia nummularia	11.0
Glechoma hederacea	11.0	Geum urbanum	11.0
Euonymus europaeus	11.0	Corylus avellana	11.0
Anemone nemorosa	11.0	Salix aurita	10.0
Molinia caerulea agg.	10.0	Climacium dendroides	10.0
Calystegia sepium	10.0	Agrostis stolonifera	10.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Alnus glutinosa	100.0	Carex acutiformis	17.0
Carex elongata	7.0	Thelypteris palustris	6.0
Fraxinus excelsior	5.0	Carex paniculata	5.0

G1.5 - Broadleaved bog woodland on acid peat

*Diagnostic species (phi coefficient * 100)*

Betula pubescens	42.5	Sphagnum palustre	30.4
Sphagnum fimbriatum	28.4	Molinia caerulea agg.	24.6
Polytrichum commune	20.9	Frangula alnus	20.0
Sphagnum squarrosum	17.7	Betula pendula	17.4
Salix aurita	16.5	Aulacomnium palustre	15.8

Constant species (occurrence frequencies)

Betula pubescens	78.0	Molinia caerulea agg.	73.0
Frangula alnus	46.0	Betula pendula	44.0
Sorbus aucuparia	35.0	Quercus robur	33.0
Dryopteris carthusiana	31.0	Vaccinium myrtillus	30.0
Sphagnum palustre	30.0	Rubus fruticosus agg.	30.0
Pinus sylvestris	30.0	Polytrichum commune	27.0
Deschampsia flexuosa	25.0	Calluna vulgaris	25.0
Juncus effusus	24.0	Salix cinerea	23.0
Aulacomnium palustre	22.0	Lonicera periclymenum	20.0
Dryopteris dilatata	20.0	Potentilla erecta	19.0
Pleurozium schreberi	19.0	Lysimachia vulgaris	19.0
Alnus glutinosa	19.0	Eriophorum vaginatum	18.0
Dicranum scoparium	17.0	Agrostis canina	17.0
Sphagnum fimbriatum	16.0	Carex nigra	16.0
Vaccinium oxycoccos	15.0	Salix aurita	15.0
Picea abies	15.0	Mnium hornum	15.0
Hypnum cupressiforme	15.0	Polytrichastrum formosum	14.0
Sphagnum fallax	13.0	Pseudoscleropodium purum	13.0
Phragmites australis	13.0	Carex rostrata	13.0
Kindbergia praelonga	12.0	Holcus lanatus	12.0
Calamagrostis canescens	12.0	Vaccinium uliginosum	11.0
Sphagnum squarrosum	11.0	Quercus petraea	11.0
Pteridium aquilinum	11.0	Potentilla palustris	11.0
Hypnum jutlandicum	11.0	Galium palustre	11.0
Eriophorum angustifolium	11.0	Vaccinium vitis-idaea	10.0
Erica tetralix	10.0	Carex curta	10.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Betula pubescens	55.0	Molinia caerulea agg.	42.0
Betula pendula	26.0	Sphagnum palustre	11.0
Sphagnum fallax	8.0	Eriophorum vaginatum	6.0

G1.6a - Fagus woodland on non-acid soils

*Diagnostic species (phi coefficient * 100)*

Fagus sylvatica	30.2	Galium odoratum	25.9
Viola reichenbachiana	19.0	Lamium galeobdolon	17.9
Mycelis muralis	16.9	Mercurialis perennis	16.9

Cardamine bulbifera	16.2	Prenanthes purpurea	15.8
Acer pseudoplatanus	15.7	Oxalis acetosella	15.0
<i>Constant species (occurrence frequencies)</i>			
Fagus sylvatica	99.0	Galium odoratum	56.0
Viola reichenbachiana	48.0	Oxalis acetosella	43.0
Lamiasium galeobdolon	43.0	Acer pseudoplatanus	43.0
Dryopteris filix-mas	38.0	Mercurialis perennis	37.0
Mycelis muralis	34.0	Fraxinus excelsior	34.0
Hedera helix	33.0	Athyrium filix-femina	30.0
Anemone nemorosa	30.0	Poa nemoralis	28.0
Carex sylvatica	27.0	Rubus fruticosus agg.	26.0
Prenanthes purpurea	26.0	Picea abies	26.0
Euphorbia amygdaloides	26.0	Abies alba	24.0
Sanicula europaea	23.0	Hieracium murorum	23.0
Fragaria vesca	23.0	Corylus avellana	23.0
Melica uniflora	22.0	Geranium robertianum	22.0
Sorbus aucuparia	21.0	Polygonatum multiflorum	20.0
Milium effusum	20.0	Senecio nemorensis	19.0
Hepatica nobilis	19.0	Carpinus betulus	19.0
Carex digitata	19.0	Cardamine bulbifera	19.0
Brachypodium sylvaticum	19.0	Paris quadrifolia	18.0
Solidago virgaurea	17.0	Quercus petraea	17.0
Lonicera xylosteum	17.0	Lathyrus vernus	17.0
Daphne mezereum	17.0	Rubus idaeus	16.0
Phyteuma spicatum	15.0	Crataegus monogyna	15.0
Ajuga reptans	15.0	Acer platanoides	15.0
Acer campestre	15.0	Prunus avium	14.0
Polygonatum verticillatum	14.0	Neottia nidus-avis	14.0
Epilobium montanum	14.0	Actaea spicata	14.0
Sorbus aria agg.	13.0	Luzula luzuloides	13.0
Melica nutans	12.0	Maianthemum bifolium	12.0
Circaea lutetiana	12.0	Asarum europaeum	12.0
Urtica dioica	11.0	Ulmus glabra	11.0
Sambucus nigra	11.0	Rosa arvensis	11.0
Polystichum aculeatum	11.0	Moehringia trinervia	11.0
Ilex aquifolium	11.0	Campanula trachelium	11.0
Vicia sepium	10.0	Viburnum lantana	10.0
Veronica chamaedrys	10.0	Stellaria holostea	10.0
Pulmonaria officinalis	10.0	Lilium martagon	10.0
Dryopteris dilatata	10.0	Daphne laureola	10.0
Convallaria majalis	10.0		
<i>Dominant species (percentage frequencies of occurrences with cover > 25%)</i>			
Fagus sylvatica	99.0	Galium odoratum	6.0

G1.6b - Fagus woodland on acid soils

*Diagnostic species (phi coefficient * 100)*

Fagus sylvatica	29.1	Polytrichastrum formosum	19.1
Luzula luzuloides	17.7	Deschampsia flexuosa	16.8
Dicranella heteromalla	16.0	Vaccinium myrtillus	15.8

Constant species (occurrence frequencies)

Fagus sylvatica	99.0	Deschampsia flexuosa	50.0
Vaccinium myrtillus	49.0	Polytrichastrum formosum	39.0
Sorbus aucuparia	38.0	Pteridium aquilinum	34.0
Oxalis acetosella	34.0	Luzula luzuloides	33.0
Quercus petraea	30.0	Picea abies	30.0
Hieracium murorum	27.0	Ilex aquifolium	25.0
Prenanthes purpurea	24.0	Athyrium filix-femina	23.0
Abies alba	23.0	Dicranum scoparium	22.0
Rubus fruticosus agg.	21.0	Poa nemoralis	20.0
Hedera helix	20.0	Acer pseudoplatanus	20.0
Hypnum cupressiforme	19.0	Dryopteris dilatata	19.0
Maianthemum bifolium	18.0	Luzula sylvatica	18.0
Veronica officinalis	17.0	Solidago virgaurea	17.0
Lonicera periclymenum	17.0	Dryopteris filix-mas	17.0
Dicranella heteromalla	17.0	Luzula pilosa	16.0
Carex pilulifera	16.0	Rubus idaeus	14.0
Blechnum spicant	14.0	Mycelis muralis	13.0
Corylus avellana	13.0	Quercus robur	12.0
Pinus sylvestris	11.0	Mnium hornum	11.0
Fraxinus excelsior	11.0	Dryopteris carthusiana	11.0
Calamagrostis arundinacea	11.0	Betula pendula	11.0
Atrichum undulatum	11.0	Anemone nemorosa	11.0
Melampyrum pratense	10.0	Leucobryum glaucum	10.0
Castanea sativa	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Fagus sylvatica	99.0	Vaccinium myrtillus	9.0
Deschampsia flexuosa	7.0		

G1.7a - Temperate and submediterranean thermophilous deciduous woodland

*Diagnostic species (phi coefficient * 100)*

Quercus pubescens	30.5	Quercus cerris	26.6
Fraxinus ornus	24.6	Buglossoides purpureocaerulea	21.0
Cornus mas	20.0	Carpinus orientalis	19.7
Quercus frainetto	19.4	Crataegus monogyna	19.0
Ostrya carpinifolia	17.6	Ligustrum vulgare	16.6
Acer monspessulanum	16.2	Sorbus domestica	16.1
Tamus communis	15.6	Sorbus torminalis	15.4
Lathyrus niger	15.3	Viola alba	15.2

Tanacetum corymbosum 15.1

Constant species (occurrence frequencies)

Crataegus monogyna	58.0	Quercus pubescens	47.0
Hedera helix	35.0	Fraxinus ornus	34.0
Ligustrum vulgare	33.0	Acer campestre	33.0
Brachypodium pinnatum	31.0	Brachypodium sylvaticum	30.0
Teucrium chamaedrys	29.0	Prunus spinosa	29.0
Quercus cerris	28.0	Cornus sanguinea	28.0
Rubia peregrina	26.0	Clinopodium vulgare	26.0
Quercus petraea	25.0	Dactylis glomerata	25.0
Cornus mas	25.0	Tamus communis	24.0
Viburnum lantana	23.0	Fragaria vesca	23.0
Vincetoxicum hirundinaria	22.0	Rosa canina agg.	22.0
Sorbus torminalis	21.0	Ruscus aculeatus	21.0
Juniperus communis subsp. communis	21.0	Corylus avellana	21.0
Poa nemoralis	20.0	Tanacetum corymbosum	18.0
Stachys officinalis	18.0	Melittis melissophyllum	18.0
Veronica chamaedrys	17.0	Rubus ulmifolius	17.0
Ostrya carpinifolia	17.0	Clematis vitalba	17.0
Buglossoides purpureo-caerulea	17.0	Viola hirta	16.0
Lathyrus niger	16.0	Hippocrepis emerus	16.0
Festuca heterophylla	16.0	Euphorbia cyparissias	16.0
Carex flacca	16.0	Viola alba	15.0
Sorbus aria agg.	15.0	Carpinus betulus	15.0
Asparagus acutifolius	15.0	Rubus fruticosus agg.	14.0
Pyrus communis agg.	14.0	Prunus avium	14.0
Melica uniflora	14.0	Hieracium murorum	14.0
Geum urbanum	14.0	Euonymus europaeus	14.0
Cruciata glabra	14.0	Viola reichenbachiana	13.0
Quercus ilex	13.0	Polygonatum odoratum	13.0
Euphorbia amygdaloides	13.0	Carpinus orientalis	13.0
Rosa arvensis	12.0	Rhamnus catharticus	12.0
Pteridium aquilinum	12.0	Lonicera xylosteum	12.0
Campanula persicifolia	12.0	Quercus frainetto	11.0
Luzula forsteri	11.0	Lonicera etrusca	11.0
Hypericum perforatum	11.0	Geranium sanguineum	11.0
Genista tinctoria	11.0	Galium mollugo agg.	11.0
Fagus sylvatica	11.0	Acer monspessulanum	11.0
Sorbus domestica	10.0	Silene nutans	10.0
Primula veris	10.0	Helleborus foetidus	10.0
Acer opalus	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Quercus pubescens	29.0	Quercus cerris	14.0
Quercus petraea	13.0	Ostrya carpinifolia	8.0
Quercus frainetto	6.0	Quercus faginea	6.0

Quercus robur	5.0	Hedera helix	5.0
Carpinus orientalis	5.0	Buxus sempervirens	5.0
Brachypodium pinnatum	5.0		

G1.7b - Mediterranean thermophilous deciduous woodland

*Diagnostic species (phi coefficient * 100)*

Quercus ithaburensis	99.4	Asphodelus ramosus	55.7
Sarcopoterium spinosum	53.3	Rumex tuberosus	51.3
Theligonum cynocrambe	51.0	Briza maxima	50.7
Veronica cymbalaria	47.8	Hymenocarpus circinnatus	47.6
Tordylium apulum	46.5	Urospermum picroides	46.2
Lagoecia cuminoides	46.0	Trifolium uniflorum	42.8
Anthemis chia	41.9	Leontodon tuberosus	41.1
Trifolium stellatum	40.0	Avena barbata	40.0
Urginea maritima	39.4	Gagea graeca	38.7
Carduus pycnocephalus	37.9	Galium murale	37.7
Biscutella didyma	37.1	Origanum onites	35.4
Ornithopus compressus	34.8	Cynosurus echinatus	34.7
Geranium lucidum	33.9	Euphorbia peplus	33.9
Petrorrhagia dubia	33.8	Pyrus amygdaliformis	33.5
Bromus madritensis	33.3	Hordeum bulbosum	33.1
Aetheorhiza bulbosa	33.0	Aira elegantissima	32.8
Parentucellia latifolia	32.6	Cistus incanus	32.6
Sherardia arvensis	32.3	Torilis humilis	32.1
Cerastium comatum	31.8	Anemone pavonina	31.1
Phlomis fruticosa	30.7	Calicotome villosa	30.5
Anagyris foetida	30.3	Picnemon acarna	29.5
Ballota acetabulosa	29.1	Trifolium clypeatum	28.9
Trifolium angustifolium	28.9	Trifolium physodes	28.8
Oxalis pes-caprae	28.8	Hypochaeris achyrophorus	28.4
Brachypodium distachyon	28.4	Muscari comosum	27.6
Trifolium grandiflorum	27.3	Scaligeria napiformis	27.2
Medicago disciformis	26.7	Geranium molle	26.7
Tuberaria guttata	26.6	Lagurus ovatus	26.6
Quercus trojana	26.5	Trifolium scabrum	26.4
Quercus coccifera	26.4	Myosotis incrassata	26.4
Scandix pecten-veneris	26.3	Umbilicus horizontalis	26.2
Asparagus acutifolius	26.0	Piptatherum miliaceum	25.9
Lupinus angustifolius	25.8	Rubia tenuifolia	25.7
Trifolium campestre	25.6	Knautia integrifolia	25.0
Trifolium tomentosum	24.8	Fumana arabica	24.6
Selaginella denticulata	24.5	Rhagadiolus stellatus	23.9
Carlina corymbosa	23.8	Hirschfeldia incana	23.7
Rumex bucephalophorus	23.6	Vicia articulata	23.3
Bromus intermedius	23.3	Fumaria judaica	23.2
Arisarum vulgare	23.0	Hypericum triquetrifolium	22.9

Psoralea bituminosa	22.7	Desmazeria rigida	22.6
Silene cretica	22.5	Crepis hellenica	22.5
Cotoneaster nummularius	22.4	Trifolium infamia-ponertii	22.3
Centaurea raphanina	22.3	Asparagus aphyllus	22.3
Crepis multiflora	21.9	Hordeum murinum	21.8
Anthemis rigida	21.8	Phagnalon graecum	21.7
Crepis commutata	21.7	Anemone coronaria	21.5
Vulpia ciliata	21.4	Ferula communis	21.3
Crepis foetida	21.2	Cyclamen creticum	20.8
Bromus sterilis	20.6	Anagallis arvensis	20.4
Olea europaea var. sylvestris	20.0	Hypericum empetrifolium	20.0
Arabis verna	20.0	Pistacia terebinthus	19.9
Salvia tomentosa	19.7	Cyclamen graecum	19.7
Spartium junceum	19.4	Cerastium glomeratum	19.4
Euphorbia rigida	19.3	Campanula spatulata	19.2
Vicia hybrida	18.8	Dracunculus vulgaris	18.8
Satureja thymbra	18.5	Medicago polymorpha	18.3
Medicago arabica	18.2	Ziziphora capitata	17.8
Prasium majus	17.8	Viola sieheana	17.7
Asterolinon linum-stellatum	17.7	Salvia aethiopis	17.5
Plantago bellardii	17.5	Phleum subulatum	17.4
Lolium rigidum	17.3	Hedypnois cretica	17.3
Hieracium cymosum	16.9	Phleum boissieri	16.8
Orchis sancta	16.8	Lupinus albus	16.8
Cyclamen hederifolium	16.7	Anthemis wernerii	16.7
Bunium microcarpum subsp. microcarpum	16.6	Veronica bozakmanii	16.5
Gypsophila tubulosa	16.5	Globularia orientalis	16.5
Taeniatherum asperum	16.4	Salvia triloba	16.4
Galium aparine	16.4	Aegilops speltoides	16.4
Rostraria cristata	16.3	Cistus laurifolius	16.3
Verbascum lasianthum	16.2	Fumaria macrocarpa	16.2
Silene bellidifolia	16.1	Silene behen	16.1
Muscari weissii	16.1	Allium neapolitanum	16.1
Umbilicus rupestris	16.0	Genista acanthoclada	15.9
Geranium rotundifolium	15.7	Paliurus spina-christi	15.5
Micromeria cremnophila	15.5	Dianthus lydus	15.5
Ornithogalum nutans	15.2	Lathyrus laxiflorus	15.2
Dactylis glomerata subsp. glomerata	15.2	Crepis dioscoridis	15.2
Trifolium affine	15.1	Poa bulbosa	15.1
Piptatherum coerulescens	15.1		
<i>Constant species (occurrence frequencies)</i>			
Quercus ithaburensis	100.0	Dactylis glomerata	57.0
Asphodelus ramosus	54.0	Galium aparine	46.0
Briza maxima	46.0	Trifolium campestre	43.0
Sarcopoterium spinosum	37.0	Asparagus acutifolius	37.0

Sherardia arvensis	34.0	Avena barbata	34.0
Theligonum cynocrambe	31.0	Cynosurus echinatus	31.0
Urospermum picroides	29.0	Urginea maritima	29.0
Trifolium stellatum	29.0	Tordylium apulum	29.0
Rumex tuberosus	29.0	Quercus coccifera	29.0
Cistus incanus	29.0	Veronica cymbalaria	26.0
Leontodon tuberosus	26.0	Lagoecia cuminoides	26.0
Hymenocarpus circinnatus	26.0	Anagallis arvensis	26.0
Trifolium scabrum	23.0	Trifolium angustifolium	23.0
Teucrium chamaedrys	23.0	Poa bulbosa	23.0
Ornithopus compressus	23.0	Muscari comosum	23.0
Geranium molle	23.0	Calicotome villosa	23.0
Bromus madritensis	23.0	Brachypodium distachyon	23.0
Aira elegantissima	23.0	Aetheorhiza bulbosa	23.0
Trifolium uniflorum	20.0	Pyrus amygdaliformis	20.0
Lagurus ovatus	20.0	Geranium lucidum	20.0
Galium murale	20.0	Euphorbia peplus	20.0
Desmazeria rigida	20.0	Carlina corymbosa	20.0
Carduus pycnocephalus	20.0	Bromus sterilis	20.0
Anthemis chia	20.0	Tuberaria guttata	17.0
Teucrium polium	17.0	Quercus pubescens	17.0
Pteridium aquilinum	17.0	Pistacia terebinthus	17.0
Piptatherum miliaceum	17.0	Phlomis fruticosa	17.0
Parentucellia latifolia	17.0	Hypochaeris achyrophorus	17.0
Hordeum murinum	17.0	Hordeum bulbosum	17.0
Gagea graeca	17.0	Dactylis glomerata subsp. glomerata	17.0
Biscutella didyma	17.0	Arisarum vulgare	17.0
Vulpia ciliata	14.0	Spartium junceum	14.0
Rumex bucephalophorus	14.0	Quercus cerris	14.0
Psoralea bituminosa	14.0	Petrorhagia dubia	14.0
Origanum onites	14.0	Juniperus oxycedrus	14.0
Crepis foetida	14.0	Cerastium glomeratum	14.0
Trifolium physodes	11.0	Torilis humilis	11.0
Tamus communis	11.0	Senecio vulgaris	11.0
Selaginella denticulata	11.0	Scandix pecten-veneris	11.0
Scaligeria napiformis	11.0	Rumex conglomeratus	11.0
Prasium majus	11.0	Pistacia lentiscus	11.0
Picnemon acarna	11.0	Oxalis pes-caprae	11.0
Olea europaea var. sylvestris	11.0	Hypericum perforatum	11.0
Fraxinus ornus	11.0	Falcaria vulgaris	11.0
Cyclamen hederifolium	11.0	Cerastium comatum	11.0
Brachypodium sylvaticum	11.0	Ballota acetabulosa	11.0
Asterolinon linum-stellatum	11.0	Asparagus aphyllus	11.0
Anemone pavonina	11.0	Anagyris foetida	11.0
Acer campestre	11.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Quercus ithaburensis	94.0	Phlomis fruticosa	11.0
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Sarcopoterium spinosum	9.0	Asphodelus ramosus	9.0
Cistus incanus	6.0		

G1.8 - Acidophilous Quercus woodland

*Diagnostic species (phi coefficient * 100)*

Lonicera periclymenum	24.3	Quercus petraea	21.9
Pteridium aquilinum	18.8	Teucrium scorodonia	18.6
Deschampsia flexuosa	18.2	Melampyrum pratense	17.6
Polytrichastrum formosum	17.1	Castanea sativa	16.8
Ilex aquifolium	16.4	Frangula alnus	15.6
Holcus mollis	15.1		

Constant species (occurrence frequencies)

Quercus petraea	62.0	Deschampsia flexuosa	54.0
Pteridium aquilinum	49.0	Lonicera periclymenum	47.0
Sorbus aucuparia	41.0	Fagus sylvatica	38.0
Quercus robur	37.0	Vaccinium myrtillus	35.0
Polytrichastrum formosum	35.0	Frangula alnus	35.0
Rubus fruticosus agg.	31.0	Teucrium scorodonia	30.0
Melampyrum pratense	30.0	Hedera helix	30.0
Corylus avellana	29.0	Betula pendula	29.0
Ilex aquifolium	28.0	Holcus mollis	26.0
Hypnum cupressiforme	24.0	Dicranum scoparium	23.0
Castanea sativa	23.0	Molinia caerulea agg.	22.0
Calluna vulgaris	21.0	Luzula luzuloides	18.0
Carpinus betulus	18.0	Agrostis capillaris	18.0
Solidago virgaurea	16.0	Hieracium murorum	16.0
Dryopteris dilatata	16.0	Crataegus monogyna	16.0
Carex pilulifera	16.0	Betula pubescens	16.0
Veronica officinalis	15.0	Poa nemoralis	15.0
Pinus sylvestris	15.0	Mnium hornum	15.0
Thuidium tamariscinum	14.0	Anthoxanthum odoratum	14.0
Oxalis acetosella	12.0	Luzula pilosa	12.0
Leucobryum glaucum	12.0	Festuca ovina	12.0
Polypodium vulgare	11.0	Pleurozium schreberi	11.0
Maianthemum bifolium	11.0	Dryopteris carthusiana	11.0
Dicranella heteromalla	11.0	Cytisus scoparius	11.0
Blechnum spicant	11.0	Prunus avium	10.0
Fraxinus excelsior	10.0	Convallaria majalis	10.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Quercus petraea	56.0	Quercus robur	33.0
Deschampsia flexuosa	13.0	Vaccinium myrtillus	11.0
Pteridium aquilinum	10.0	Castanea sativa	10.0

G1.9a - Boreal-nemoral mountain Betula and Populus tremula woodland on mineral soils

*Diagnostic species (phi coefficient * 100)*

Betula pubescens subsp. carpatica	92.5	Dicranum majus	33.3
Rhytidiadelphus loreus	31.9	Vaccinium myrtillus	31.0
Betula pubescens subsp. tortuosa	28.6	Plagiothecium undulatum	26.8
Melampyrum pratense	25.2	Prunus padus subsp. borealis	24.8
Vaccinium vitis-idaea	24.7	Pleurozium schreberi	24.7
Agrostis vinealis	24.7	Hylocomium splendens	24.2
Sphagnum robustum	23.9	Salix silesiaca	23.5
Oreopteris limbosperma	23.3	Galium saxatile	23.1
Deschampsia flexuosa	22.6	Poa pratensis subsp. alpigena	22.0
Calamagrostis villosa	21.9	Pinus mugo	21.1
Blechnum spicant	21.1	Rumex alpestris	21.0
Calypogeia neesiana	20.6	Sorbus aucuparia	19.5
Ptilium crista-castrensis	19.1	Luzula sylvatica	18.9
Cerastium alpinum	18.5	Thuidium tamariscinum	18.4
Linnaea borealis	18.4	Dicranum fuscescens	18.4
Athyrium distentifolium	18.0	Dryopteris Xmantoniae	17.9
Umbilicaria hyperborea	17.5	Ptilidium pulcherrimum	17.3
Trientalis europaea	17.2	Umbilicaria hirsuta	16.8
Polytrichastrum alpinum	16.8	Laserpitium archangelica	16.8
Racomitrium microcarpon	16.7	Polytrichastrum formosum	16.5
Myosotis decumbens	16.4	Mnium hornum	16.4
Ribes petraeum	16.3	Cornus suecica	16.2
Sphagnum girgensohnii	16.1	Dryopteris oreades	15.7
Carex binervis	15.0		

Constant species (occurrence frequencies)

Vaccinium myrtillus	94.0	Betula pubescens subsp. carpatica	90.0
Deschampsia flexuosa	68.0	Sorbus aucuparia	61.0
Pleurozium schreberi	52.0	Vaccinium vitis-idaea	48.0
Melampyrum pratense	45.0	Hylocomium splendens	45.0
Picea abies	39.0	Oxalis acetosella	39.0
Rhytidiadelphus loreus	35.0	Polytrichastrum formosum	35.0
Galium saxatile	35.0	Thuidium tamariscinum	29.0
Luzula sylvatica	29.0	Dicranum scoparium	29.0
Calluna vulgaris	29.0	Anthoxanthum odoratum	29.0
Potentilla erecta	26.0	Blechnum spicant	26.0
Plagiothecium undulatum	23.0	Mnium hornum	23.0
Dicranum majus	23.0	Calamagrostis villosa	23.0
Agrostis vinealis	23.0	Trientalis europaea	19.0
Dryopteris dilatata	19.0	Solidago virgaurea	16.0
Rumex alpestris	16.0	Polytrichum commune	16.0
Pinus mugo	16.0	Oreopteris limbosperma	16.0
Luzula pilosa	16.0	Luzula multiflora	16.0
Luzula luzuloides	16.0	Gymnocarpium dryopteris	16.0

Viola biflora	13.0	Sphagnum capillifolium	13.0
Silene dioica	13.0	Senecio nemorensis	13.0
Rubus idaeus	13.0	Rhytidiadelphus triquetrus	13.0
Ptilium crista-castrensis	13.0	Pseudoscleropodium purum	13.0
Fagus sylvatica	13.0	Epilobium angustifolium	13.0
Dryopteris filix-mas	13.0	Calamagrostis arundinacea	13.0
Agrostis capillaris	13.0	Acer pseudoplatanus	13.0
Abies alba	13.0	Viola riviniana	10.0
Valeriana montana	10.0	Vaccinium uliginosum	10.0
Sphagnum girgensohnii	10.0	Salix silesiaca	10.0
Rosa pendulina	10.0	Rhytidiadelphus squarrosus	10.0
Pteridium aquilinum	10.0	Prenanthes purpurea	10.0
Polytrichastrum alpinum	10.0	Polygonatum verticillatum	10.0
Pinus sylvestris	10.0	Orthilia secunda	10.0
Lycopodium annotinum	10.0	Linnaea borealis	10.0
Lamiastrum galeobdolon	10.0	Hypnum jutlandicum	10.0
Hypnum cupressiforme	10.0	Fragaria vesca	10.0
Dryopteris carthusiana	10.0	Dicranum fuscescens	10.0
Deschampsia cespitosa	10.0	Carex binervis	10.0
Carex bigelowii	10.0	Betula pubescens subsp. tortuosa	10.0
Athyrium filix-femina	10.0	Athyrium distentifolium	10.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Betula pubescens subsp. carpatica	84.0	Vaccinium myrtillus	35.0
Hylocomium splendens	26.0	Deschampsia flexuosa	10.0
Calamagrostis villosa	10.0	Vaccinium vitis-idaea	6.0
Rhododendron hirsutum	6.0		

G1.9b - Mediterranean mountain Betula and Populus tremula woodland on mineral soils

*Diagnostic species (phi coefficient * 100)*

Betula pubescens subsp. celtiberica	87.6	Erica arborea	42.1
Saxifraga spathularis	40.9	Crepis lampsanoides	35.6
Genista florida	30.8	Blechnum spicant	28.9
Salix atrocinerea	27.8	Daboecia cantabrica	25.4
Cytisus balansae	24.3	Dryopteris affinis	23.4
Teucrium scorodonia	22.7	Omphalodes nitida	21.1
Betula pendula subsp. fontqueri	19.8	Quercus pyrenaica	18.5
Stellaria holostea	18.3	Luzula sylvatica	18.3
Vaccinium myrtillus	18.2	Ilex aquifolium	17.2
Sorbus aucuparia	17.0	Pteridium aquilinum	16.7
Ulex gallii	15.9	Lonicera periclymenum	15.9
Euphorbia hyberna	15.7	Digitalis purpurea	15.7
Festuca elegans	15.1		

Constant species (occurrence frequencies)

Betula pubescens subsp. celtiberica	82.0	Vaccinium myrtillus	57.0
Erica arborea	55.0	Sorbus aucuparia	54.0
Pteridium aquilinum	46.0	Stellaria holostea	40.0
Deschampsia flexuosa	40.0	Teucrium scorodonia	39.0
Blechnum spicant	36.0	Lonicera periclymenum	34.0
Corylus avellana	34.0	Ilex aquifolium	31.0
Frangula alnus	30.0	Poa nemoralis	29.0
Luzula sylvatica	28.0	Quercus robur	27.0
Rubus fruticosus agg.	26.0	Melampyrum pratense	26.0
Athyrium filix-femina	26.0	Saxifraga spathularis	25.0
Holcus mollis	25.0	Hedera helix	25.0
Dryopteris filix-mas	25.0	Salix atrocinerea	24.0
Oxalis acetosella	24.0	Rubus ulmifolius	23.0
Anemone nemorosa	23.0	Crepis lampsanoides	22.0
Agrostis capillaris	21.0	Dryopteris affinis	20.0
Veronica officinalis	19.0	Fagus sylvatica	18.0
Calluna vulgaris	17.0	Sorbus aria agg.	16.0
Genista florida	16.0	Solidago virgaurea	15.0
Dryopteris dilatata	15.0	Daboecia cantabrica	15.0
Potentilla erecta	14.0	Digitalis purpurea	14.0
Castanea sativa	14.0	Betula pendula	14.0
Quercus pyrenaica	13.0	Cytisus balansae	13.0
Quercus petraea	12.0	Euphorbia dulcis	12.0
Anthoxanthum odoratum	12.0	Salix caprea	10.0
Ranunculus serpens subsp. nemorosus	10.0	Festuca rubra	10.0
Erica vagans	10.0	Acer pseudoplatanus	10.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Betula pubescens subsp. celtiberica	82.0	Vaccinium myrtillus	17.0
Betula pendula	13.0	Pteridium aquilinum	8.0
Rubus ulmifolius	7.0	Luzula sylvatica	6.0
Erica arborea	6.0		

G1.Aa - Carpinus and Quercus mesic deciduous woodland

*Diagnostic species (phi coefficient * 100)*

Carpinus betulus	31.2	Quercus petraea	21.0
Acer campestre	19.1	Polygonatum multiflorum	18.6
Viola reichenbachiana	17.5	Stellaria holostea	17.0
Anemone nemorosa	16.1	Poa nemoralis	15.8
Lamium galeobdolon	15.8	Prunus avium	15.3

Constant species (occurrence frequencies)

Carpinus betulus	78.0	Quercus petraea	60.0
Corylus avellana	47.0	Viola reichenbachiana	46.0
Acer campestre	43.0	Poa nemoralis	41.0

Lamium galeobdolon	40.0	Anemone nemorosa	40.0
Hedera helix	39.0	Fagus sylvatica	38.0
Polygonatum multiflorum	37.0	Crataegus monogyna	37.0
Stellaria holostea	36.0	Quercus robur	35.0
Prunus avium	32.0	Fraxinus excelsior	32.0
Galium odoratum	30.0	Fragaria vesca	29.0
Brachypodium sylvaticum	29.0	Geum urbanum	28.0
Rubus fruticosus agg.	25.0	Melica uniflora	25.0
Lathyrus vernus	25.0	Cornus sanguinea	25.0
Convallaria majalis	25.0	Ajuga reptans	25.0
Ligustrum vulgare	24.0	Carex sylvatica	24.0
Milium effusum	23.0	Acer pseudoplatanus	23.0
Euphorbia amygdaloides	22.0	Euonymus europaeus	22.0
Veronica chamaedrys	21.0	Tilia cordata	21.0
Mercurialis perennis	21.0	Dryopteris filix-mas	21.0
Asarum europaeum	21.0	Mycelis muralis	20.0
Melica nutans	20.0	Crataegus laevigata	20.0
Pulmonaria officinalis	19.0	Oxalis acetosella	19.0
Moehringia trinervia	18.0	Hieracium murorum	17.0
Geranium robertianum	17.0	Carex pilosa	17.0
Campanula trachelium	17.0	Aegopodium podagraria	17.0
Sorbus aucuparia	16.0	Maianthemum bifolium	16.0
Luzula luzuloides	16.0	Carex digitata	16.0
Glechoma hederacea	15.0	Atrichum undulatum	15.0
Acer platanoides	15.0	Urtica dioica	14.0
Symphytum tuberosum	14.0	Sorbus torminalis	14.0
Scrophularia nodosa	14.0	Sanicula europaea	14.0
Rosa arvensis	14.0	Lonicera xylosteum	14.0
Lathyrus niger	14.0	Galium schultesii	14.0
Galium aparine	14.0	Dactylis glomerata	14.0
Vicia sepium	13.0	Viburnum opulus	13.0
Sambucus nigra	13.0	Luzula pilosa	13.0
Hepatica nobilis	13.0	Galium sylvaticum	13.0
Cruciata glabra	13.0	Campanula persicifolia	13.0
Athyrium filix-femina	13.0	Melittis melissophyllum	12.0
Festuca heterophylla	12.0	Deschampsia cespitosa	12.0
Arum maculatum	12.0	Viola riviniana	11.0
Rosa canina agg.	11.0	Ranunculus auricomus agg.	11.0
Prunus spinosa	11.0	Lonicera periclymenum	11.0
Cardamine bulbifera	11.0	Campanula rapunculoides	11.0
Solidago virgaurea	10.0	Ranunculus ficaria	10.0
Pulmonaria obscura	10.0	Polytrichastrum formosum	10.0
Dactylis glomerata subsp. aschersoniana	10.0	Clinopodium vulgare	10.0
Alliaria petiolata	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Carpinus betulus	56.0	Quercus petraea	40.0
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Quercus robur	23.0	Hedera helix	8.0
Anemone nemorosa	8.0	Corylus avellana	7.0

G1.Ab - Ravine woodland

*Diagnostic species (phi coefficient * 100)*

Acer pseudoplatanus	25.6	Fraxinus excelsior	25.4
Ulmus glabra	23.4	Lamium galeobdolon	23.1
Mercurialis perennis	23.0	Dryopteris filix-mas	18.5
Tilia platyphyllos	17.7	Lunaria rediviva	16.9
Asplenium scolopendrium	16.3	Galium odoratum	16.0
Corylus avellana	15.9	Geranium robertianum	15.7
Actaea spicata	15.4	Sambucus nigra	15.2
Acer platanoides	15.1		

Constant species (occurrence frequencies)

Fraxinus excelsior	73.0	Acer pseudoplatanus	68.0
Lamium galeobdolon	56.0	Corylus avellana	52.0
Mercurialis perennis	51.0	Dryopteris filix-mas	47.0
Fagus sylvatica	45.0	Urtica dioica	40.0
Galium odoratum	38.0	Geranium robertianum	36.0
Oxalis acetosella	35.0	Hedera helix	34.0
Ulmus glabra	33.0	Sambucus nigra	31.0
Viola reichenbachiana	30.0	Polygonatum multiflorum	29.0
Athyrium filix-femina	28.0	Aegopodium podagraria	28.0
Poa nemoralis	27.0	Geum urbanum	27.0
Carpinus betulus	27.0	Acer platanoides	27.0
Senecio nemorensis	26.0	Brachypodium sylvaticum	26.0
Tilia cordata	24.0	Anemone nemorosa	24.0
Rubus fruticosus agg.	23.0	Paris quadrifolia	23.0
Lonicera xylosteum	23.0	Asarum europaeum	22.0
Acer campestre	22.0	Picea abies	21.0
Impatiens noli-tangere	21.0	Crataegus monogyna	21.0
Carex sylvatica	21.0	Tilia platyphyllos	19.0
Mycelis muralis	19.0	Milium effusum	19.0
Sorbus aucuparia	18.0	Galium aparine	18.0
Arum maculatum	18.0	Actaea spicata	18.0
Quercus robur	17.0	Euonymus europaeus	17.0
Stellaria holostea	16.0	Stachys sylvatica	16.0
Plagiomnium undulatum	16.0	Fragaria vesca	16.0
Campanula trachelium	16.0	Rubus idaeus	15.0
Quercus petraea	15.0	Melica nutans	15.0
Cornus sanguinea	15.0	Prunus avium	14.0
Primula elatior	14.0	Polystichum aculeatum	14.0
Moehringia trinervia	14.0	Lathyrus vernus	14.0
Ajuga reptans	14.0	Abies alba	14.0
Pulmonaria officinalis	13.0	Melica uniflora	13.0

Circaea lutetiana	13.0	Asplenium scolopendrium	13.0
Pulmonaria obscura	12.0	Hepatica nobilis	12.0
Glechoma hederacea	12.0	Epilobium montanum	12.0
Daphne mezereum	12.0	Alliaria petiolata	12.0
Sanicula europaea	11.0	Prenanthes purpurea	11.0
Heracleum sphondylium	11.0	Eurhynchium striatum	11.0
Dryopteris dilatata	11.0	Carex digitata	11.0
Viburnum opulus	10.0	Stellaria nemorum	10.0
Salvia glutinosa	10.0	Phyteuma spicatum	10.0
Petasites albus	10.0	Lilium martagon	10.0
Ligustrum vulgare	10.0	Euphorbia amygdaloides	10.0
Convallaria majalis	10.0	Cardamine bulbifera	10.0
Adoxa moschatellina	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Fraxinus excelsior	41.0	Acer pseudoplatanus	35.0
Mercurialis perennis	14.0	Tilia cordata	13.0
Corylus avellana	11.0	Tilia platyphyllos	8.0
Ulmus glabra	7.0	Hedera helix	7.0
Lamium galeobdolon	6.0	Fagus sylvatica	6.0

G1.Ba - Alnus cordata woodland

*Diagnostic species (phi coefficient * 100)*

Alnus cordata	98.1	Polystichum setiferum	48.9
Cyclamen repandum	41.9	Chaerophyllum temulum	41.5
Helleborus lividus subsp. corsicus	41.4	Ranunculus lanuginosus	41.3
Bryonia cretica	36.3	Lathyrus venetus	34.8
Potentilla micrantha	34.5	Pteridium aquilinum	33.4
Geranium versicolor	32.7	Castanea sativa	32.7
Anemone apennina	29.7	Acer cappadocicum	29.0
Digitalis lutea	28.9	Calystegia silvatica	28.4
Hypericum hircinum	28.3	Daphne laureola	27.7
Rumex sanguineus	27.0	Oenanthe pimpinelloides	26.9
Aremonia agrimonoides	26.4	Geranium robertianum	26.2
Festuca heterophylla	26.1	Lamium flexuosum	26.0
Allium triquetrum	25.7	Clematis vitalba	25.5
Viola alba	25.1	Brachypodium sylvaticum	25.0
Luzula forsteri	24.6	Geranium nodosum	24.4
Rubus ulmifolius	24.0	Crocus imperati	23.4
Dittrichia viscosa	22.9	Galium rotundifolium	22.5
Senecio stabianus	22.4	Crocus corsicus	22.2
Asperula taurina	22.0	Lamium bifidum	21.8
Cymbalaria hepaticifolia	21.6	Colchicum neapolitanum	21.6
Arisarum proboscideum	20.3	Lilium bulbiferum	19.2
Quercus ilex	19.1	Asperula laevigata	18.8
Carex microcarpa	18.6	Ilex aquifolium	18.5

Stachys sylvatica	18.2	Fraxinus ornus	17.9
Mycelis muralis	17.8	Clinopodium vulgare	17.5
Hedera helix	17.4	Primula vulgaris	17.3
Parentucellia viscosa	17.2	Lathyrus clymenum	17.2
Allium pendulinum	16.8	Juglans regia	16.7
Epipactis microphylla	16.3	Sanicula europaea	16.2
Bellium bellidioides	15.8	Helleborus bocconeii	15.6
Narcissus poeticus	15.5	Briza minor	15.4
Crataegus monogyna	15.2	Bellis sylvestris	15.1

Constant species (occurrence frequencies)

Alnus cordata	100.0	Pteridium aquilinum	89.0
Brachypodium sylvaticum	67.0	Geranium robertianum	61.0
Polystichum setiferum	56.0	Hedera helix	56.0
Ranunculus lanuginosus	50.0	Crataegus monogyna	50.0
Castanea sativa	50.0	Clematis vitalba	44.0
Rubus ulmifolius	39.0	Rubus fruticosus agg.	39.0
Mycelis muralis	39.0	Chaerophyllum temulum	39.0
Fragaria vesca	39.0	Festuca heterophylla	39.0
Stachys sylvatica	33.0	Potentilla micrantha	33.0
Poa trivialis	33.0	Lathyrus venetus	33.0
Ilex aquifolium	33.0	Geum urbanum	33.0
Daphne laureola	33.0	Cyclamen repandum	33.0
Clinopodium vulgare	33.0	Viola reichenbachiana	28.0
Viola alba	28.0	Stellaria media	28.0
Sanicula europaea	28.0	Rumex sanguineus	28.0
Quercus ilex	28.0	Melica uniflora	28.0
Luzula forsteri	28.0	Fraxinus ornus	28.0
Bryonia cretica	28.0	Aremonia agrimonoides	28.0
Urtica dioica	22.0	Tamus communis	22.0
Primula vulgaris	22.0	Helleborus lividus subsp. corsicus	22.0
Galium rotundifolium	22.0	Galium aparine	22.0
Digitalis lutea	22.0	Circaea lutetiana	22.0
Ajuga reptans	22.0	Viola riviniana	17.0
Teucrium scorodonia	17.0	Sambucus nigra	17.0
Rosa canina agg.	17.0	Quercus pubescens	17.0
Prunus spinosa	17.0	Oenanthe pimpinelloides	17.0
Geranium versicolor	17.0	Geranium nodosum	17.0
Euphorbia amygdaloides	17.0	Dittrichia viscosa	17.0
Dactylis glomerata	17.0	Anemone apennina	17.0
Vinca minor	11.0	Veronica montana	11.0
Symphytum tuberosum	11.0	Salvia glutinosa	11.0
Ruscus aculeatus	11.0	Rubia peregrina	11.0
Rosa arvensis	11.0	Quercus cerris	11.0
Pyrus communis agg.	11.0	Prunus avium	11.0
Prunella vulgaris	11.0	Ostrya carpinifolia	11.0
Muscari comosum	11.0	Moehringia trinervia	11.0
Mercurialis perennis	11.0	Lilium bulbiferum	11.0

Lathyrus niger	11.0	Lamium flexuosum	11.0
Juglans regia	11.0	Hypericum montanum	11.0
Hypericum hircinum	11.0	Digitalis purpurea	11.0
Carex flacca	11.0	Calystegia silvatica	11.0
Asplenium onopteris	11.0	Asperula taurina	11.0
Arum italicum	11.0	Aquilegia vulgaris	11.0
Allium triquetrum	11.0	Acer cappadocicum	11.0
Acer campestre	11.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Alnus cordata	100.0	Pteridium aquilinum	28.0
Sanicula europaea	11.0	Rubus fruticosus agg.	11.0
Ranunculus lanuginosus	11.0	Brachypodium sylvaticum	11.0
Viola alba	6.0	Senecio stabianus	6.0
Rubus ulmifolius	6.0	Hedera helix	6.0
Dittrichia viscosa	6.0	Daphne laureola	6.0
Anemone apennina	6.0		

G2.1 - Mediterranean evergreen Quercus woodland

*Diagnostic species (phi coefficient * 100)*

Quercus rotundifolia	42.7	Rubia peregrina	41.6
Quercus ilex	41.0	Smilax aspera	33.8
Asplenium onopteris	31.2	Arbutus unedo	31.1
Quercus suber	30.8	Asparagus acutifolius	30.5
Phillyrea latifolia	30.2	Carex distachya	28.9
Ruscus aculeatus	28.6	Daphne gnidium	28.0
Lonicera implexa	25.4	Rhamnus alaternus	24.8
Viburnum tinus	24.7	Erica arborea	24.3
Pistacia lentiscus	21.7	Rosa sempervirens	19.9
Pistacia terebinthus	19.2	Osyris alba	19.2
Lonicera etrusca	18.8	Cistus salvifolius	18.8
Phillyrea angustifolia	18.5	Juniperus oxycedrus	18.4
Clematis flammula	18.3	Quercus coccifera	17.2
Euphorbia characias	16.9	Myrtus communis	16.7
Carex hallerana	16.7	Viola alba	16.6
Rubus ulmifolius	16.5	Brachypodium retusum	16.4
Olea europaea var. europaea	16.3	Lavandula stoechas	16.3
Cyclamen repandum	16.2	Quercus faginea	15.9
Ulex parviflorus	15.5		

Constant species (occurrence frequencies)

Rubia peregrina	72.0	Quercus ilex	56.0
Smilax aspera	41.0	Ruscus aculeatus	41.0
Asparagus acutifolius	40.0	Hedera helix	35.0
Quercus rotundifolia	32.0	Phillyrea latifolia	31.0
Arbutus unedo	31.0	Crataegus monogyna	30.0

Erica arborea	27.0	Rubus ulmifolius	26.0
Pistacia lentiscus	25.0	Asplenium onopteris	25.0
Tamus communis	23.0	Quercus pubescens	23.0
Daphne gnidium	23.0	Rhamnus alaternus	22.0
Lonicera implexa	22.0	Quercus suber	21.0
Juniperus oxycedrus	21.0	Teucrium chamaedrys	20.0
Brachypodium retusum	20.0	Cistus salvifolius	18.0
Carex distachya	18.0	Viola alba	17.0
Quercus coccifera	17.0	Carex hallerana	17.0
Brachypodium sylvaticum	17.0	Viburnum tinus	16.0
Fraxinus ornus	16.0	Rosa sempervirens	15.0
Pistacia terebinthus	15.0	Phillyrea angustifolia	15.0
Lonicera etrusca	15.0	Clematis flammula	15.0
Dactylis glomerata	14.0	Osyris alba	13.0
Myrtus communis	12.0	Pteridium aquilinum	11.0
Prunus spinosa	11.0	Lavandula stoechas	11.0
Euphorbia characias	11.0	Olea europaea var. europaea	10.0
Luzula forsteri	10.0	Hippocrepis emerus	10.0
Geranium purpureum	10.0	Buxus sempervirens	10.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Quercus ilex	51.0	Quercus rotundifolia	30.0
Quercus suber	18.0	Hedera helix	5.0

G2.2 - Mainland laurophyllous woodland

*Diagnostic species (phi coefficient * 100)*

Laurus nobilis	90.4	Celtis australis	50.1
Ruscus aculeatus	49.1	Rhamnus alaternus	48.3
Smilax aspera	44.0	Quercus ilex	38.1
Rubus ulmifolius	37.1	Orobancha hederæ	34.8
Rosa sempervirens	33.8	Acanthus mollis	33.1
Rubia peregrina	32.9	Hedera helix	28.9
Asplenium onopteris	28.8	Tamus communis	27.5
Viburnum tinus	25.5	Prunus x fruticans	24.5
Chamaerops humilis	22.6	Arum italicum	22.3
Phillyrea latifolia	20.4	Trachycarpus excelsa	19.3
Elaeagnus pungens	19.3	Asparagus acutifolius	19.1
Ligustrum japonicum	18.7	Urtica rupestris	18.6
Ficus carica	18.4	Clematis vitalba	17.6
Hypericum androsaemum	17.5	Vinca major	17.1
Lonicera japonica	16.8	Platanus x hispanica	16.4
Osmunda regalis	16.4	Dryopteris pallida	16.4
Polystichum setiferum	15.8		

Constant species (occurrence frequencies)

Laurus nobilis	100.0	Hedera helix	88.0
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Ruscus aculeatus	81.0	Smilax aspera	62.0
Rubus ulmifolius	62.0	Rubia peregrina	62.0
Quercus ilex	58.0	Rhamnus alaternus	54.0
Tamus communis	46.0	Rosa sempervirens	31.0
Clematis vitalba	31.0	Celtis australis	31.0
Corylus avellana	27.0	Asplenium onopteris	27.0
Asparagus acutifolius	27.0	Phillyrea latifolia	23.0
Lonicera periclymenum	23.0	Viburnum tinus	19.0
Ulmus minor	19.0	Sambucus nigra	19.0
Quercus pubescens	19.0	Pteridium aquilinum	19.0
Prunus avium	19.0	Crataegus monogyna	19.0
Cornus sanguinea	19.0	Brachypodium sylvaticum	19.0
Arum italicum	19.0	Polystichum setiferum	15.0
Orobanche hederæ	15.0	Melica uniflora	15.0
Fraxinus ornus	15.0	Asplenium trichomanes	15.0
Acanthus mollis	15.0	Pistacia terebinthus	12.0
Chamaerops humilis	12.0	Hypericum androsaemum	12.0
Hippocrepis emerus	12.0	Fraxinus angustifolia	12.0
Carex sylvatica	12.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Laurus nobilis	100.0	Hedera helix	27.0
Smilax aspera	12.0	Ruscus aculeatus	12.0
Rubus ulmifolius	8.0	Rhamnus alaternus	8.0
Clematis vitalba	8.0		

G2.3 - Macaronesian laurophyllous woodland

*Diagnostic species (phi coefficient * 100)*

Laurus azorica	100.0	Ilex canariensis	100.0
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Constant species (occurrence frequencies)

Laurus azorica	100.0	Ilex canariensis	100.0
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Dominant species (percentage frequencies of occurrences with cover > 25%)

G2.6 - Ilex aquifolium woodland

*Diagnostic species (phi coefficient * 100)*

Ilex aquifolium	53.0	Lonicera periclymenum	19.6
Rosa gr. canina	18.1	Hedera helix	17.0

Constant species (occurrence frequencies)

Ilex aquifolium	100.0	Hedera helix	54.0
Lonicera periclymenum	41.0	Pteridium aquilinum	40.0
Rubus fruticosus agg.	31.0	Crataegus monogyna	31.0

Fagus sylvatica	30.0	Corylus avellana	26.0
Vaccinium myrtillus	21.0	Sorbus aucuparia	21.0
Quercus petraea	21.0	Deschampsia flexuosa	20.0
Oxalis acetosella	19.0	Sanicula europaea	17.0
Rubus ulmifolius	17.0	Polytrichastrum formosum	17.0
Hypnum cupressiforme	17.0	Tamus communis	16.0
Melica uniflora	16.0	Geranium robertianum	16.0
Frangula alnus	16.0	Dryopteris filix-mas	16.0
Blechnum spicant	16.0	Rosa canina agg.	14.0
Prunus spinosa	14.0	Poa nemoralis	14.0
Ruscus aculeatus	13.0	Rosa arvensis	13.0
Fraxinus excelsior	13.0	Dryopteris dilatata	13.0
Viola reichenbachiana	11.0	Urtica dioica	11.0
Stellaria holostea	11.0	Quercus robur	11.0
Mnium hornum	11.0	Leucobryum glaucum	11.0
Euphorbia amygdaloides	11.0	Carpinus betulus	11.0
Calluna vulgaris	11.0	Thuidium tamariscinum	10.0
Sambucus nigra	10.0	Holcus mollis	10.0
Daphne laureola	10.0	Anemone nemorosa	10.0
Acer campestre	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Ilex aquifolium	100.0	Pteridium aquilinum	9.0
Hedera helix	7.0	Vaccinium myrtillus	6.0

G3.1a - Temperate mountain Picea woodland

*Diagnostic species (phi coefficient * 100)*

Melampyrum sylvaticum	39.1	Picea abies	37.0
Homogyne alpina	35.5	Luzula luzulina	30.6
Calamagrostis villosa	28.5	Hieracium murorum	27.1
Veronica urticifolia	26.7	Vaccinium myrtillus	26.1
Gymnocarpium dryopteris	25.7	Oxalis acetosella	25.4
Luzula sylvatica	25.4	Lycopodium annotinum	24.5
Prenanthes purpurea	24.2	Hylocomium splendens	24.2
Dicranum scoparium	23.4	Rhytidiadelphus triquetrus	23.3
Lonicera nigra	23.2	Larix decidua	23.0
Viola biflora	22.7	Valeriana tripteris	22.7
Sorbus aucuparia	22.5	Adenostyles alliariae	22.3
Mnium spinosum	21.0	Vaccinium vitis-idaea	20.8
Dryopteris carthusiana agg.	20.4	Polygonatum verticillatum	18.7
Listera cordata	18.7	Huperzia selago	18.5
Luzula nivea	18.1	Solidago virgaurea	17.9
Plagiochila asplenoides	17.9	Abies alba	17.9
Rosa pendulina	17.3	Maianthemum bifolium	17.3
Moneses uniflora	16.8	Adenostyles alpina	16.7
Gentiana asclepiadea	15.9	Cicerbita alpina	15.9

Polystichum lonchitis	15.7	Polytrichastrum formosum	15.6
Lonicera alpigena	15.5	Asplenium viride	15.4
Athyrium filix-femina	15.1	Knautia dipsacifolia	15.0

Constant species (occurrence frequencies)

Picea abies	100.0	Vaccinium myrtillus	78.0
Oxalis acetosella	71.0	Sorbus aucuparia	69.0
Hieracium murorum	64.0	Dicranum scoparium	52.0
Solidago virgaurea	45.0	Homogyne alpina	45.0
Hylocomium splendens	44.0	Prenanthes purpurea	42.0
Deschampsia flexuosa	41.0	Vaccinium vitis-idaea	40.0
Athyrium filix-femina	39.0	Melampyrum sylvaticum	38.0
Luzula sylvatica	38.0	Abies alba	37.0
Rhytidiadelphus triquetrus	35.0	Maianthemum bifolium	34.0
Fragaria vesca	34.0	Polytrichastrum formosum	33.0
Fagus sylvatica	32.0	Rubus idaeus	30.0
Gymnocarpium dryopteris	29.0	Dryopteris dilatata	29.0
Dryopteris filix-mas	28.0	Calamagrostis villosa	28.0
Veronica urticifolia	27.0	Pleurozium schreberi	27.0
Polygonatum verticillatum	25.0	Acer pseudoplatanus	25.0
Larix decidua	24.0	Viola biflora	22.0
Senecio nemorensis	22.0	Luzula luzuloides	22.0
Valeriana tripteris	21.0	Lonicera nigra	21.0
Phyteuma spicatum	19.0	Luzula luzulina	19.0
Lamiastrum galeobdolon	19.0	Adenostyles alliariae	19.0
Veronica officinalis	18.0	Paris quadrifolia	18.0
Mycelis muralis	18.0	Melica nutans	18.0
Lycopodium annotinum	18.0	Daphne mezereum	18.0
Viola reichenbachiana	17.0	Rosa pendulina	17.0
Luzula nivea	17.0	Gentiana asclepiadea	17.0
Rubus saxatilis	16.0	Plagiochila asplenioides	16.0
Orthilia secunda	16.0	Calamagrostis varia	16.0
Huperzia selago	15.0	Carex digitata	15.0
Veratrum album	14.0	Ranunculus serpens subsp. nemorosus	14.0
Petasites albus	14.0	Hypnum cupressiforme	14.0
Epilobium montanum	14.0	Adenostyles alpina	14.0
Rhytidiadelphus loreus	13.0	Luzula pilosa	13.0
Lonicera alpigena	13.0	Ctenidium molluscum	13.0
Calamagrostis arundinacea	13.0	Ajuga reptans	13.0
Phegopteris connectilis	12.0	Knautia dipsacifolia	12.0
Hepatica nobilis	12.0	Geranium sylvaticum	12.0
Carex alba	12.0	Sorbus aria agg.	11.0
Potentilla erecta	11.0	Polygala chamaebuxus	11.0
Poa nemoralis	11.0	Mercurialis perennis	11.0
Deschampsia cespitosa	11.0	Blechnum spicant	11.0
Aster bellidiastrium	11.0	Asplenium viride	11.0
Tortella tortuosa	10.0	Saxifraga rotundifolia	10.0

Sanicula europaea	10.0	Primula elatior	10.0
Polystichum lonchitis	10.0	Chaerophyllum hirsutum	10.0
Corylus avellana	10.0	Aposeris foetida	10.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Picea abies	100.0	Vaccinium myrtillus	22.0
Hylocomium splendens	12.0	Oxalis acetosella	6.0
Rhytidiadelphus triquetrus	5.0	Calamagrostis villosa	5.0

G3.1b - Temperate mountain Abies woodland

*Diagnostic species (phi coefficient * 100)*

Abies alba	48.5	Prenanthes purpurea	30.3
Lonicera nigra	29.2	Oxalis acetosella	26.4
Picea abies	21.7	Galium rotundifolium	21.0
Festuca altissima	20.0	Dryopteris filix-mas	20.0
Fagus sylvatica	19.4	Hieracium murorum	19.0
Sorbus aucuparia	18.9	Polygonatum verticillatum	18.9
Athyrium filix-femina	18.9	Luzula nivea	18.5
Senecio nemorensis	18.0	Rubus idaeus	18.0
Mycelis muralis	16.8	Dryopteris dilatata	16.7
Galium odoratum	15.5	Epilobium montanum	15.5
Sambucus racemosa	15.4	Veronica urticifolia	15.1
Rosa pendulina	15.0		

Constant species (occurrence frequencies)

Abies alba	96.0	Oxalis acetosella	73.0
Fagus sylvatica	70.0	Picea abies	60.0
Sorbus aucuparia	58.0	Prenanthes purpurea	51.0
Dryopteris filix-mas	51.0	Athyrium filix-femina	47.0
Hieracium murorum	45.0	Vaccinium myrtillus	43.0
Rubus idaeus	43.0	Viola reichenbachiana	41.0
Fragaria vesca	41.0	Acer pseudoplatanus	38.0
Galium odoratum	37.0	Mycelis muralis	36.0
Senecio nemorensis	33.0	Rubus fruticosus agg.	32.0
Lamiastrum galeobdolon	32.0	Dryopteris dilatata	32.0
Corylus avellana	32.0	Solidago virgaurea	29.0
Polytrichastrum formosum	29.0	Maianthemum bifolium	27.0
Lonicera nigra	26.0	Geranium robertianum	25.0
Deschampsia flexuosa	25.0	Polygonatum verticillatum	24.0
Epilobium montanum	24.0	Dicranum scoparium	24.0
Carex sylvatica	23.0	Paris quadrifolia	22.0
Mercurialis perennis	22.0	Hylocomium splendens	22.0
Carex digitata	22.0	Sanicula europaea	21.0
Lonicera xylosteum	20.0	Festuca altissima	20.0
Galium rotundifolium	19.0	Dryopteris carthusiana	19.0
Veronica officinalis	18.0	Phyteuma spicatum	18.0

Luzula luzuloides	18.0	Fraxinus excelsior	18.0
Ajuga reptans	18.0	Sorbus aria agg.	17.0
Sambucus racemosa	17.0	Luzula pilosa	17.0
Luzula nivea	17.0	Thuidium tamariscinum	16.0
Rhytidiadelphus triquetrus	16.0	Luzula sylvatica	16.0
Gymnocarpium dryopteris	16.0	Rosa pendulina	15.0
Hypnum cupressiforme	15.0	Hepatica nobilis	15.0
Actaea spicata	15.0	Veronica urticifolia	14.0
Poa nemoralis	14.0	Melica nutans	14.0
Lathyrus vernus	14.0	Hedera helix	14.0
Eurhynchium striatum	13.0	Daphne mezereum	13.0
Calamagrostis arundinacea	13.0	Petasites albus	12.0
Moehringia trinervia	12.0	Euphorbia amygdaloides	12.0
Quercus petraea	11.0	Pteridium aquilinum	11.0
Polystichum aculeatum	11.0	Plagiomnium undulatum	11.0
Orthilia secunda	11.0	Neottia nidus-avis	11.0
Milium effusum	11.0	Impatiens noli-tangere	11.0
Brachypodium sylvaticum	11.0	Atrichum undulatum	11.0
Anemone nemorosa	11.0	Sambucus nigra	10.0
Salvia glutinosa	10.0	Rhytidiadelphus loreus	10.0
Plagiomnium affine	10.0	Plagiochila asplenioides	10.0
Melica uniflora	10.0	Melampyrum sylvaticum	10.0
Lonicera alpigena	10.0	Hordelymus europaeus	10.0
Gentiana asclepiadea	10.0	Asarum europaeum	10.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Abies alba	96.0	Oxalis acetosella	11.0
Vaccinium myrtillus	8.0	Fagus sylvatica	8.0
Picea abies	7.0	Hylocomium splendens	5.0

G3.1c - Mediterranean mountain Abies woodland

*Diagnostic species (phi coefficient * 100)*

Abies pinsapo	79.5	Daphne latifolia	66.6
Abies cephalonica	49.3	Ononis reuteri	42.5
Geranium purpureum	42.0	Cerastium gibraltarium	41.4
Rosa sicula	41.3	Carum graecum	41.0
Hyacinthoides hispanica	39.8	Doronicum plantagineum	39.5
Hieracium pannosum	38.9	Piptatherum paradoxum	37.3
Paeonia broteroi	37.0	Berberis vulgaris	34.1
Rosa micrantha	33.0	Daphne oleoides	32.6
Helleborus foetidus	31.6	Hieracium cymosum	30.7
Quercus Xmarianica	30.0	Jurinea bocconii	30.0
Genista cupanii	30.0	Galium peloponnesiacum	30.0
Bupleurum spinosum	30.0	Atropa baetica	30.0
Amelanchier chelmea	30.0	Plantago humilis	29.9
Abies nebrodensis	29.9	Odontites bocconeii	29.7

Conopodium thalictrifolium	29.7	Asperula chlorantha	29.7
Lilium heldreichii	29.6	Juniperus drupacea	29.6
Armeria villosa	29.6	Danthoniastrum compactum	29.5
Armeria nebrodensis	29.5	Pinus nigra	29.4
Stachelina uniflosculosa	29.3	Scabiosa taygetea	29.3
Hedera helix subsp. canariensis	29.2	Euphorbia deflexa	29.2
Paeonia coriacea	29.1	Lonicera arborea	29.1
Leontodon graecus	29.0	Dianthus arrostii	29.0
Ulex baeticus	28.9	Sorbus umbellata	28.8
Ferulago nodosa	28.8	Crataegus pycnoloba	28.6
Lomelosia crenata	28.5	Cirsium hypopsilum	28.4
Rosa pulverulenta	28.1	Ranunculus sprunerianus	28.1
Achillea holosericea	27.9	Quercus faginea	26.7
Thapsia garganica	26.3	Lamium garganicum	26.0
Erinacea anthyllis	26.0	Aremonia agrimonoides	25.9
Picnemon acarna	25.5	Santolina rosmarinifolia	25.1
Festuca jeanpertii	25.0	Bunium alpinum	25.0
Cistus populifolius	24.6	Cnidium silaifolium	24.2
Centaurea raphanina	23.2	Asyneuma limonifolium	23.1
Crepis fraasii	22.6	Asphodelus cerasiferus	22.5
Arabis collina	22.2	Silene italica	22.0
Bellis sylvestris	22.0	Quercus rotundifolia	21.7
Marrubium vulgare	21.6	Hypericum empetrifolium	20.9
Campanula spatulata	20.0	Rubia peregrina	19.5
Polygala nicaeensis	19.5	Geranium rotundifolium	16.5
Pulicaria odora	15.8	Hippocrepis emerus	15.4
Eryngium amethystinum	15.4	Cotoneaster tomentosus	15.4
Juniperus oxycedrus	15.3		

Constant species (occurrence frequencies)

Abies pinsapo	64.0	Daphne latifolia	45.0
Rubia peregrina	36.0	Helleborus foetidus	36.0
Geranium purpureum	36.0	Berberis vulgaris	36.0
Pinus nigra	27.0	Crataegus monogyna	27.0
Aremonia agrimonoides	27.0	Abies cephalonica	27.0
Silene italica	18.0	Ruscus aculeatus	18.0
Rosa sicula	18.0	Rosa micrantha	18.0
Quercus rotundifolia	18.0	Quercus faginea	18.0
Pteridium aquilinum	18.0	Piptatherum paradoxum	18.0
Paeonia broteroi	18.0	Ononis reuteri	18.0
Juniperus oxycedrus	18.0	Juniperus communis subsp. communis	18.0
Hyacinthoides hispanica	18.0	Hippocrepis emerus	18.0
Hieracium pannosum	18.0	Hieracium cymosum	18.0
Hedera helix	18.0	Doronicum plantagineum	18.0
Daphne oleoides	18.0	Cerastium gibraltarium	18.0
Carum graecum	18.0	Brachypodium sylvaticum	18.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Abies pinsapo	64.0	Abies cephalonica	27.0
Pinus nigra	9.0	Juniperus communis subsp. communis	9.0
Brachypodium sylvaticum	9.0	Abies nebrodensis	9.0

G3.2 - Temperate subalpine Larix, Pinus cembra and Pinus uncinata woodland

*Diagnostic species (phi coefficient * 100)*

Larix decidua	56.3	Rhododendron ferrugineum	52.4
Pinus cembra	48.1	Pinus uncinata	41.7
Homogyne alpina	37.6	Festuca flavescens	31.9
Calamagrostis villosa	31.4	Sorbus chamaemespilus	31.3
Melampyrum sylvaticum	30.6	Lonicera caerulea	30.6
Vaccinium vitis-idaea	28.6	Juniperus communis subsp. alpina	27.4
Valeriana tripteris	27.0	Rhododendron hirsutum	25.4
Alnus viridis	23.8	Vaccinium myrtillus	22.6
Rosa pendulina	22.6	Campanula scheuchzeri	22.6
Geranium sylvaticum	22.5	Hieracium prenanthoides	21.6
Polystichum lonchitis	21.5	Clematis alpina	21.5
Salix appendiculata	21.3	Luzula sieberi	21.1
Saxifraga cuneifolia	20.7	Rhytidiadelphus triquetrus	19.9
Hylocomium splendens	19.1	Soldanella alpina	19.0
Viola biflora	18.7	Aster bellidiastrum	18.6
Peucedanum ostruthium	18.4	Luzula nivea	18.2
Gentiana purpurea	17.8	Picea abies	17.6
Luzula sylvatica	17.5	Paederota lutea	17.4
Astrantia minor	17.4	Rhodothamnus chamaecistus	17.3
Ranunculus oreophilus	17.1	Lycopodium annotinum	17.1
Pinus mugo	16.9	Laserpitium peucedanoides	16.6
Erica herbacea	16.4	Hieracium murorum	16.1
Dicranum scoparium	15.7	Pulsatilla alpina	15.6
Gentiana punctata	15.4	Calamagrostis varia	15.2

Constant species (occurrence frequencies)

Vaccinium myrtillus	69.0	Larix decidua	69.0
Vaccinium vitis-idaea	55.0	Rhododendron ferrugineum	50.0
Picea abies	50.0	Homogyne alpina	49.0
Sorbus aucuparia	48.0	Deschampsia flexuosa	42.0
Hieracium murorum	40.0	Dicranum scoparium	36.0
Hylocomium splendens	35.0	Solidago virgaurea	34.0
Calamagrostis villosa	33.0	Pinus cembra	32.0
Oxalis acetosella	32.0	Rhytidiadelphus triquetrus	31.0
Melampyrum sylvaticum	31.0	Geranium sylvaticum	30.0
Pinus uncinata	29.0	Luzula sylvatica	27.0
Valeriana tripteris	26.0	Pleurozium schreberi	26.0
Juniperus communis subsp. alpina	26.0	Rosa pendulina	24.0

Campanula scheuchzeri	23.0	Sesleria caerulea	21.0
Juniperus communis subsp. communis	21.0	Vaccinium uliginosum	20.0
Aster bellidiastrum	19.0	Anthoxanthum odoratum	19.0
Viola biflora	18.0	Sorbus chamaemespilus	18.0
Luzula nivea	17.0	Lotus corniculatus	17.0
Calamagrostis varia	17.0	Rubus saxatilis	16.0
Rhododendron hirsutum	16.0	Lonicera caerulea	16.0
Rubus idaeus	15.0	Erica herbacea	15.0
Abies alba	15.0	Veratrum album	14.0
Polytrichastrum formosum	14.0	Polystichum lonchitis	14.0
Polygala chamaebuxus	14.0	Fragaria vesca	14.0
Clematis alpina	14.0	Sorbus aria agg.	13.0
Soldanella alpina	13.0	Salix appendiculata	13.0
Potentilla erecta	13.0	Lycopodium annotinum	13.0
Hepatica nobilis	13.0	Festuca flavescens	13.0
Daphne mezereum	13.0	Carex sempervirens	13.0
Alnus viridis	13.0	Tortella tortuosa	12.0
Pulsatilla alpina	12.0	Prenanthes purpurea	12.0
Poa nemoralis	12.0	Poa alpina	12.0
Pinus mugo	12.0	Chaerophyllum hirsutum	12.0
Huperzia selago	12.0	Gymnocarpium dryopteris	12.0
Saxifraga cuneifolia	11.0	Phyteuma orbiculare	11.0
Melica nutans	11.0	Maianthemum bifolium	11.0
Lonicera alpigena	11.0	Festuca rubra	11.0
Dryopteris dilatata	11.0	Valeriana montana	10.0
Peucedanum ostruthium	10.0	Orthilia secunda	10.0
Luzula sieberi	10.0	Hieracium prenanthoides	10.0
Helianthemum nummularium	10.0	Galium pumilum	10.0
Asplenium viride	10.0	Amelanchier ovalis	10.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Larix decidua	51.0	Vaccinium myrtillus	31.0
Pinus uncinata	24.0	Rhododendron ferrugineum	23.0
Pinus cembra	17.0	Hylocomium splendens	10.0
Calamagrostis villosa	6.0	Vaccinium vitis-idaea	5.0
Rhododendron hirsutum	5.0		

G3.4a - Temperate and continental Pinus sylvestris woodland

*Diagnostic species (phi coefficient * 100)*

Pinus sylvestris	40.2	Pleurozium schreberi	24.9
Dicranum polysetum	24.6	Betula pendula	18.6
Deschampsia flexuosa	17.6	Quercus robur	15.9
Dicranum scoparium	15.7	Vaccinium myrtillus	15.3
Frangula alnus	15.2		

Constant species (occurrence frequencies)

Pinus sylvestris	100.0	Deschampsia flexuosa	53.0
Pleurozium schreberi	50.0	Vaccinium myrtillus	48.0
Sorbus aucuparia	46.0	Betula pendula	46.0
Quercus robur	45.0	Calluna vulgaris	37.0
Frangula alnus	35.0	Dicranum scoparium	35.0
Vaccinium vitis-idaea	27.0	Picea abies	27.0
Rubus fruticosus agg.	23.0	Molinia caerulea agg.	23.0
Festuca ovina	23.0	Hypnum cupressiforme	22.0
Quercus petraea	21.0	Polytrichastrum formosum	20.0
Juniperus communis subsp. communis	19.0	Hylocomium splendens	19.0
Fagus sylvatica	19.0	Dryopteris carthusiana	19.0
Dicranum polysetum	19.0	Melampyrum pratense	18.0
Agrostis capillaris	18.0	Pteridium aquilinum	17.0
Pseudoscleropodium purum	16.0	Luzula pilosa	15.0
Fragaria vesca	15.0	Rumex acetosella	14.0
Rubus idaeus	14.0	Dryopteris dilatata	14.0
Hieracium pilosella	13.0	Hieracium murorum	13.0
Prunus serotina	12.0	Pohlia nutans	12.0
Veronica officinalis	11.0	Solidago virgaurea	11.0
Leucobryum glaucum	11.0	Hypnum jutlandicum	11.0
Betula pubescens	11.0	Anthoxanthum odoratum	11.0
Calamagrostis epigejos	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Pinus sylvestris	96.0	Pleurozium schreberi	21.0
Vaccinium myrtillus	19.0	Deschampsia flexuosa	15.0
Molinia caerulea agg.	7.0	Hylocomium splendens	5.0

G3.4b - Temperate and submediterranean montane Pinus sylvestris-nigra woodland

*Diagnostic species (phi coefficient * 100)*

Amelanchier ovalis	47.7	Polygala chamaebuxus	45.8
Epipactis atrorubens	42.0	Sorbus aria agg.	35.7
Calamagrostis varia	34.9	Erica herbacea	34.2
Berberis vulgaris	33.8	Pinus sylvestris	32.6
Juniperus communis subsp. communis	29.6	Cotoneaster tomentosus	29.6
Goodyera repens	29.2	Carex humilis	28.3
Bupthalmum salicifolium	26.4	Chamaecytisus purpureus	24.7
Arctostaphylos uva-ursi	24.2	Pinus nigra	24.1
Viscum album	23.9	Globularia cordifolia	23.8
Viburnum lantana	23.5	Anthericum ramosum	21.3
Sesleria caerulea	21.2	Lavandula angustifolia	21.0
Carduus defloratus agg.	21.0	Ononis rotundifolia	20.7
Teucrium chamaedrys	20.5	Hieracium murorum	20.5

Carex alba	20.5	Achnatherum calamagrostis	19.8
Cytisus sessilifolius	19.3	Orthilia secunda	19.2
Leontodon incanus	19.2	Pyrola chlorantha	18.5
Hieracium pictum	18.5	Gymnadenia odoratissima	18.5
Rhamnus saxatilis	18.0	Teucrium montanum	17.5
Laserpitium siler	17.0	Cyclamen purpurascens	16.8
Saponaria ocymoides	16.0	Astragalus monspessulanus	15.8
Quercus pubescens	15.7	Peucedanum oreoselinum	15.7
Daphne cneorum	15.7	Galium lucidum	15.5
Brachypodium pinnatum	15.5	Teucrium lucidum	15.3
Vincetoxicum hirundinaria	15.2		

Constant species (occurrence frequencies)

Pinus sylvestris	85.0	Sorbus aria agg.	61.0
Juniperus communis subsp. communis	60.0	Amelanchier ovalis	59.0
Polygala chamaebuxus	50.0	Hieracium murorum	49.0
Teucrium chamaedrys	48.0	Brachypodium pinnatum	44.0
Carex humilis	43.0	Epipactis atrorubens	41.0
Viburnum lantana	40.0	Calamagrostis varia	40.0
Lotus corniculatus	37.0	Picea abies	36.0
Berberis vulgaris	35.0	Erica herbacea	33.0
Euphorbia cyparissias	32.0	Sesleria caerulea	31.0
Campanula rotundifolia	30.0	Quercus pubescens	27.0
Corylus avellana	27.0	Vincetoxicum hirundinaria	26.0
Pimpinella saxifraga	26.0	Fragaria vesca	26.0
Fagus sylvatica	26.0	Bupthalmum salicifolium	26.0
Anthericum ramosum	26.0	Hippocrepis comosa	25.0
Solidago virgaurea	24.0	Teucrium montanum	23.0
Orthilia secunda	22.0	Lonicera xylosteum	22.0
Pinus nigra	21.0	Crataegus monogyna	21.0
Carex flacca	21.0	Carduus defloratus agg.	21.0
Sanguisorba minor	19.0	Globularia cordifolia	19.0
Cotoneaster tomentosus	19.0	Carex alba	19.0
Arctostaphylos uva-ursi	19.0	Hieracium pilosella	18.0
Goodyera repens	18.0	Sorbus aucuparia	17.0
Ligustrum vulgare	17.0	Hippocrepis emerus	17.0
Hepatica nobilis	17.0	Cornus sanguinea	17.0
Bromus erectus	17.0	Acer pseudoplatanus	17.0
Prunella grandiflora	16.0	Peucedanum oreoselinum	16.0
Molinia caerulea agg.	16.0	Lavandula angustifolia	16.0
Cyclamen purpurascens	16.0	Viola hirta	15.0
Galium lucidum	15.0	Fraxinus excelsior	15.0
Cytisus sessilifolius	15.0	Carlina acaulis	15.0
Helianthemum nummularium	14.0	Buxus sempervirens	14.0
Anthyllis vulneraria	14.0	Scabiosa columbaria	13.0
Polygonatum odoratum	13.0	Laserpitium latifolium	13.0
Genista pilosa	13.0	Fraxinus ornus	13.0

Festuca ovina	13.0	Asperula cynanchica	13.0
Abies alba	13.0	Tortella tortuosa	12.0
Quercus petraea	12.0	Phyteuma orbiculare	12.0
Ostrya carpinifolia	12.0	Melica nutans	12.0
Leucanthemum vulgare agg.	12.0	Cirsium acaule	12.0
Carlina vulgaris	12.0	Astragalus monspessulanus	12.0
Sesleria coerulans	11.0	Rubus saxatilis	11.0
Rhamnus saxatilis	11.0	Potentilla erecta	11.0
Platanthera bifolia	11.0	Frangula alnus	11.0
Epipactis helleborine	11.0	Cephalanthera longifolia	11.0
Carex ornithopoda	11.0	Brachypodium sylvaticum	11.0
Aster bellidiastrum	11.0	Acer opalus	11.0
Viscum album	10.0	Valeriana tripteris	10.0
Prunus mahaleb	10.0	Prunus avium	10.0
Primula veris	10.0	Potentilla tabernaemontani	10.0
Ononis spinosa	10.0	Leontodon incanus	10.0
Leontodon hispidus	10.0	Laserpitium siler	10.0
Hylocomium splendens	10.0	Centaurea scabiosa	10.0
Achnatherum calamagrostis	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Pinus sylvestris	80.0	Pinus nigra	19.0
Erica herbacea	18.0	Sesleria caerulea	9.0
Buxus sempervirens	8.0	Carex humilis	6.0
Calamagrostis varia	6.0	Brachypodium pinnatum	6.0
Arctostaphylos uva-ursi	5.0		

G3.4c - Mediterranean montane Pinus sylvestris-nigra woodland

*Diagnostic species (phi coefficient * 100)*

Festuca iberica	60.9	Pinus sylvestris	35.1
Avenula marginata	35.1	Buxus sempervirens	31.0
Cruciata glabra	28.4	Juniperus communis subsp. communis	27.1
Hepatica nobilis	26.7	Polygala calcarea	26.5
Cytisus balansae	26.4	Luzula lactea	23.4
Quercus cerrioides	21.9	Berberis aetnensis	21.8
Vicia pyrenaica	20.8	Arctostaphylos uva-ursi	19.9
Amelanchier ovalis	19.3	Viola willkommii	18.2
Veronica officinalis	18.2	Galium rotundifolium	17.7
Ononis aragonensis	17.3	Vicia incana	16.9
Pinus nigra	16.7	Hieracium murorum	16.5
Erica vagans	16.2	Pyrola chlorantha	16.1
Sorbus aria agg.	15.9	Viola canina	15.6
Lathyrus montanus	15.6	Avenula requienii	15.6
Arenaria montana	15.5		

Constant species (occurrence frequencies)

Pinus sylvestris	92.0	Juniperus communis subsp. communis	55.0
Cruciata glabra	50.0	Festuca iberica	47.0
Hepatica nobilis	46.0	Deschampsia flexuosa	45.0
Hieracium murorum	41.0	Buxus sempervirens	39.0
Veronica officinalis	37.0	Fragaria vesca	33.0
Calluna vulgaris	30.0	Vaccinium myrtillus	29.0
Fagus sylvatica	29.0	Sorbus aria agg.	28.0
Pteridium aquilinum	26.0	Hylocomium splendens	26.0
Sorbus aucuparia	25.0	Viola canina	22.0
Avenula marginata	22.0	Amelanchier ovalis	22.0
Ilex aquifolium	21.0	Stachys officinalis	20.0
Polygala calcarea	20.0	Silene nutans	18.0
Prunella grandiflora	18.0	Lathyrus montanus	18.0
Dicranum scoparium	18.0	Anthoxanthum odoratum	18.0
Teucrium scorodonia	17.0	Poa nemoralis	17.0
Galium rotundifolium	17.0	Galium pumilum	17.0
Quercus pubescens	16.0	Primula veris	16.0
Helleborus foetidus	16.0	Festuca rubra	16.0
Brachypodium pinnatum	16.0	Avenula pratensis	16.0
Arctostaphylos uva-ursi	16.0	Abies alba	16.0
Viola riviniana	14.0	Pinus nigra	14.0
Daphne laureola	14.0	Cytisus balansae	14.0
Carex flacca	14.0	Bromus erectus	14.0
Acer opalus	14.0	Solidago virgaurea	13.0
Rubus idaeus	13.0	Rosa canina agg.	13.0
Rhytidadelphus triquetrus	13.0	Hieracium pilosella	13.0
Erica vagans	13.0	Rubus ulmifolius	12.0
Ranunculus serpens subsp. nemorosus	12.0	Polypodium vulgare	12.0
Melampyrum pratense	12.0	Lotus corniculatus	12.0
Lonicera xylosteum	12.0	Juniperus communis subsp. alpina	12.0
Galium verum	12.0	Viola reichenbachiana	11.0
Vincetoxicum hirundinaria	11.0	Vicia sepium	11.0
Viburnum lantana	11.0	Valeriana montana	11.0
Stellaria holostea	11.0	Pimpinella saxifraga	11.0
Euphorbia amygdaloides	11.0	Crataegus monogyna	11.0
Carex humilis	11.0	Campanula rotundifolia	11.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Pinus sylvestris	89.0	Buxus sempervirens	28.0
Festuca iberica	16.0	Deschampsia flexuosa	12.0
Pinus nigra	9.0	Brachypodium pinnatum	8.0
Hylocomium splendens	7.0	Cytisus balansae	5.0

G3.6 - Mediterranean and Balkan subalpine Pinus heldreichii-peuce woodland

*Diagnostic species (phi coefficient * 100)*

Pinus heldreichii	79.8	Pinus peuce	64.9
Daphne blagayana	41.0	Minuartia baldaccii	40.1
Daphne oleoides	40.0	Moehringia pendula	37.1
Sesleria robusta	33.5	Hieracium pannosum	32.7
Juniperus communis subsp. alpina	32.3	Bornmuellera tymphaea	32.3
Wulfenia carinthiaca	28.2	Thymus rechingeri	28.1
Aremonia agrimonoides	28.1	Asperula aristata	27.3
Crocus veluchensis	26.4	Lerchenfeldia flexuosa	25.9
Festuca valida	25.9	Luzula luzulina	25.1
Acinos alpinus	24.1	Geranium macrorrhizum	23.3
Verbascum nikolai	23.1	Polygala nicaeensis	22.4
Trinia frigida	22.0	Rosa myriacantha	22.0
Festuca koritnicensis	21.3	Hieracium cymosum	20.5
Chamaecytisus absinthioides	20.0	Euphorbia amygdaloides	20.0
Linum capitatum	19.8	Calamagrostis arundinacea	19.8
Luzula sylvatica	19.4	Scabiosa cinerea	19.1
Hieracium hoppeanum	18.3	Poa thessala	18.1
Bromus cappadocicus	17.9	Poa media	16.8
Potentilla ternata	16.7	Veratrum album	16.5
Thesium auriculatum	16.4	Pulsatilla halleri subsp. rhodopaea	16.4
Primula kitaibeliana	16.4	Iberis sempervirens	16.4
Festuca hercegovina	16.4	Centaurea lacerata	16.4
Bromus pindicus	16.4	Arenaria gracilis	16.4
Leotodon incanus	16.3	Cytisus agnipilus	16.3
Senecio thapsoides	16.2	Festuca pirinensis	16.2
Carum rigidulum	16.2	Amphoricarpus neumayeri	16.2
Edrianthus tenuifolius	16.1	Gentianella crispata	15.9
Daphne mezereum	15.7	Carum appuanum	15.7
Saxifraga scardica	15.5	Ferulago sylvatica	15.5
Aubrieta gracilis	15.5	Alyssum scardicum	15.5
Potentilla micrantha	15.4	Oxytropis urumovii	15.4
Dianthus integer	15.4	Knautia ambigua	15.3
Genista carinalis	15.3	Buxus sempervirens	15.3
Bornmuellera baldaccii	15.2	Stachelina uniflosculosa	15.1

Constant species (occurrence frequencies)

Pinus heldreichii	65.0	Vaccinium myrtillus	46.0
Fagus sylvatica	46.0	Pinus peuce	43.0
Fragaria vesca	43.0	Euphorbia amygdaloides	41.0
Juniperus communis subsp. alpina	32.0	Calamagrostis arundinacea	32.0
Veronica chamaedrys	30.0	Picea abies	30.0
Luzula sylvatica	30.0	Aremonia agrimonoides	30.0
Abies alba	27.0	Juniperus communis subsp. communis	24.0
Hieracium murorum	24.0	Dryopteris filix-mas	24.0
Daphne oleoides	24.0	Daphne mezereum	24.0

Acinos alpinus	24.0	Festuca heterophylla	22.0
Anemone nemorosa	22.0	Thymus praecox	19.0
Oxalis acetosella	19.0	Luzula luzuloides	19.0
Daphne blagayana	19.0	Buxus sempervirens	19.0
Asperula aristata	19.0	Ajuga reptans	19.0
Veronica officinalis	16.0	Veratrum album	16.0
Rubus idaeus	16.0	Primula veris	16.0
Moehringia pendula	16.0	Minuartia baldaccii	16.0
Luzula luzulina	16.0	Homogyne alpina	16.0
Brachypodium pinnatum	16.0	Trifolium alpestre	14.0
Solidago virgaurea	14.0	Sesleria robusta	14.0
Rosa pendulina	14.0	Potentilla micrantha	14.0
Mycelis muralis	14.0	Lerchenfeldia flexuosa	14.0
Hieracium pannosum	14.0	Hieracium hoppeanum	14.0
Helianthemum nummularium	14.0	Galium rotundifolium	14.0
Dactylis glomerata	14.0	Cruciata glabra	14.0
Rubus fruticosus agg.	11.0	Polystichum aculeatum	11.0
Polygala nicaeensis	11.0	Poa nemoralis	11.0
Pinus sylvestris	11.0	Pinus nigra	11.0
Ostrya carpinifolia	11.0	Melampyrum sylvaticum	11.0
Lotus corniculatus	11.0	Lonicera xylosteum	11.0
Hypericum maculatum	11.0	Hieracium cymosum	11.0
Geranium sylvaticum	11.0	Geranium macrorrhizum	11.0
Gentiana asclepiadea	11.0	Galium lucidum	11.0
Euphorbia cyparissias	11.0	Crocus veluchensis	11.0
Clinopodium vulgare	11.0	Campanula glomerata	11.0
Brachypodium sylvaticum	11.0	Bornmuellera tymphaea	11.0
Asplenium trichomanes	11.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Pinus heldreichii	65.0	Pinus peuce	35.0
Vaccinium myrtillus	22.0	Buxus sempervirens	11.0
Thymus praecox	8.0	Juniperus communis subsp. alpina	8.0
Calamagrostis arundinacea	8.0	Brachypodium sylvaticum	8.0
Brachypodium pinnatum	5.0		

G3.7 - Mediterranean lowland to submontane Pinus woodland

*Diagnostic species (phi coefficient * 100)*

Pinus halepensis	53.7	Pinus pinaster	44.1
Cistus salvifolius	30.3	Pistacia lentiscus	29.6
Pinus brutia	28.5	Juniperus oxycedrus	26.2
Quercus ilex	25.2	Phillyrea angustifolia	24.7
Arbutus unedo	24.3	Brachypodium retusum	24.1
Lonicera implexa	23.7	Smilax aspera	23.5
Quercus coccifera	23.2	Rubia peregrina	22.6
Rosmarinus officinalis	22.5	Asparagus acutifolius	21.8

Phillyrea latifolia	19.3	Myrtus communis	18.9
Pinus pinea	18.8	Cistus incanus	18.8
Dorycnium pentaphyllum	18.7	Cistus monspeliensis	18.7
Calicotome spinosa	18.3	Cistus albidus	17.9
Thymus vulgaris	17.8	Erica arborea	17.8
Staelina dubia	17.7	Clematis flammula	17.0
Helichrysum stoechas	16.3	Avenula bromoides	16.3
Erica manipuliflora	16.2	Daphne gnidium	15.6
Erica scoparia	15.5	Ononis minutissima	15.2

Constant species (occurrence frequencies)

Pinus halepensis	53.0	Rubia peregrina	41.0
Pistacia lentiscus	37.0	Quercus ilex	36.0
Pinus pinaster	36.0	Cistus salvifolius	32.0
Juniperus oxycedrus	31.0	Brachypodium retusum	31.0
Smilax aspera	30.0	Asparagus acutifolius	30.0
Arbutus unedo	26.0	Quercus coccifera	24.0
Quercus pubescens	22.0	Phillyrea angustifolia	22.0
Lonicera implexa	22.0	Dactylis glomerata	22.0
Phillyrea latifolia	21.0	Erica arborea	21.0
Thymus vulgaris	20.0	Rosmarinus officinalis	20.0
Calluna vulgaris	19.0	Dorycnium pentaphyllum	17.0
Myrtus communis	15.0	Hedera helix	15.0
Clematis flammula	15.0	Cistus monspeliensis	15.0
Cistus incanus	15.0	Teucrium chamaedrys	14.0
Rhamnus alaternus	14.0	Pteridium aquilinum	14.0
Helichrysum stoechas	14.0	Daphne gnidium	14.0
Brachypodium phoenicoides	14.0	Teucrium polium	12.0
Ruscus aculeatus	12.0	Avenula bromoides	12.0
Sanguisorba minor	11.0	Juniperus phoenicea	11.0
Erica scoparia	11.0	Erica cinerea	11.0
Crataegus monogyna	11.0	Cistus albidus	11.0
Aphyllanthes monspeliensis	11.0	Staelina dubia	10.0
Rubus ulmifolius	10.0	Quercus suber	10.0
Pinus brutia	10.0	Olea europaea var. europaea	10.0
Lavandula stoechas	10.0	Genista pilosa	10.0
Carex hallerana	10.0	Calicotome spinosa	10.0
Brachypodium pinnatum	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Pinus halepensis	49.0	Pinus pinaster	31.0
Pinus brutia	10.0	Calluna vulgaris	7.0
Brachypodium retusum	7.0	Pistacia lentiscus	6.0
Pinus pinea	6.0	Rosmarinus officinalis	5.0
Pteridium aquilinum	5.0	Erica arborea	5.0

G3.9a - Taxus baccata woodland

*Diagnostic species (phi coefficient * 100)*

Taxus baccata	85.0	Arenaria balearica	25.5
Cymbalaria aequitriloba	25.1	Cyclamen repandum	23.8
Ilex aquifolium	21.9	Stachys corsica	20.2
Glechoma sardoa	19.5	Hedera helix	18.4
Daphne laureola	17.3	Geranium lucidum	16.8
Acer monspessulanum	15.5	Ribes multiflorum	15.4
Geranium lanuginosum	15.4	Asplenium onopteris	15.4
Hypochaeris robertia	15.3	Rhamnus alpinus	15.1

Constant species (occurrence frequencies)

Taxus baccata	100.0	Hedera helix	58.0
Ilex aquifolium	39.0	Fagus sylvatica	35.0
Viola reichenbachiana	32.0	Mercurialis perennis	31.0
Corylus avellana	24.0	Sorbus aria agg.	23.0
Fraxinus excelsior	23.0	Quercus ilex	22.0
Mylis muralis	20.0	Daphne laureola	20.0
Crataegus monogyna	20.0	Tamus communis	19.0
Sambucus nigra	19.0	Hepatica nobilis	16.0
Cyclamen repandum	16.0	Acer pseudoplatanus	16.0
Rubus fruticosus agg.	15.0	Hieracium murorum	15.0
Fragaria vesca	15.0	Euphorbia amygdaloides	15.0
Ruscus aculeatus	14.0	Dryopteris filix-mas	14.0
Brachypodium sylvaticum	14.0	Asplenium onopteris	14.0
Acer opalus	14.0	Sanicula europaea	12.0
Rubia peregrina	12.0	Poa nemoralis	12.0
Melica uniflora	12.0	Clematis vitalba	12.0
Asplenium trichomanes	12.0	Arum maculatum	12.0
Acer monspessulanum	12.0	Solidago virgaurea	11.0
Rubus ulmifolius	11.0	Pteridium aquilinum	11.0
Eurhynchium striatum	11.0	Cornus sanguinea	11.0
Carpinus betulus	11.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Taxus baccata	97.0	Fagus sylvatica	9.0
Hedera helix	8.0		

G3.9b - Mediterranean Cupressaceae woodland*Diagnostic species (phi coefficient * 100)*

Cupressus sempervirens	63.4	Juniperus foetidissima	49.4
Juniperus thurifera	43.2	Quercus coccifera	36.2
Centaurea raphanina	35.1	Festuca jeanpertii	30.3
Pinus brutia	29.8	Juniperus excelsa	28.7
Astragalus creticus	28.6	Hypericum empetrifolium	28.4
Urginea maritima	27.9	Daphne oleoides	26.5

Salvia triloba	25.8	Stipa bromoides	25.6
Crepis fraasii	25.4	Ballota acetabulosa	25.2
Campanula spatulata	25.1	Juniperus drupacea	24.2
Juniperus oxycedrus	23.8	Phlomis fruticosa	23.7
Abies cephalonica	23.1	Micromeria juliana	23.0
Pterocephalus perennis	22.7	Trifolium physodes	22.0
Cerastium brachypetalum	21.9	Lagoecia cuminoides	20.8
Lactuca viminea	20.7	Bellis longifolia	20.6
Marrubium velutinum	20.3	Aethionema saxatile	20.3
Helleborus cyclophyllus	20.2	Centaurea idaea	20.2
Cerastium candidissimum	20.1	Erysimum cephalonicum	19.9
Rhamnus lycioides	19.8	Melica ciliata	19.3
Ceterach officinarum	19.1	Leontodon tuberosus	19.0
Sideritis curvidens	18.8	Rosa pulverulenta	18.8
Olea europaea var. sylvestris	18.8	Prasium majus	18.7
Galium thymifolium	18.6	Asparagus aphyllus	18.6
Scandix australis	18.4	Koeleria lobata	18.4
Phleum montanum	18.3	Helictotrichon convolutum	18.0
Nepeta spruneri	17.3	Teucrium microphyllum	17.2
Arabis verna	17.2	Acer monspessulanum	17.2
Rubia tenuifolia	17.1	Phlomis lanata	17.1
Onobrychis ebenoides	17.1	Crepis cretica	17.1
Geranium purpureum	16.7	Medicago coronata	16.6
Orchis anatolica	16.5	Galium taygeteum	16.4
Lamyropsis cynaroides	16.3	Crupina crupinastrum	16.3
Teucrium polium	16.2	Euphorbia myrsinites	16.2
Erysimum pectinatum	16.2	Trifolium stellatum	16.0
Teucrium divaricatum	16.0	Galium murale	16.0
Polystichum woronowii	15.9	Euphorbia apios	15.9
Stipa holosericea	15.8	Scutellaria rupestris	15.8
Leontodon graecus	15.8	Calicotome villosa	15.8
Astragalus depressus	15.8	Salvia pomifera	15.7
Centaurea affinis	15.7	Hippocrepis bourgaei	15.6
Sedum amplexicaule	15.5	Eryngium amethystinum	15.4
Scorzonera cretica	15.3	Orlaya kochii	15.3
Lithodora hispidula	15.3	Galium monachinii	15.3
Biscutella didyma	15.3	Bupleurum glumaceum	15.1

Constant species (occurrence frequencies)

Dactylis glomerata	42.0	Cupressus sempervirens	42.0
Quercus coccifera	41.0	Juniperus oxycedrus	29.0
Juniperus foetidissima	26.0	Melica ciliata	23.0
Juniperus thurifera	21.0	Teucrium polium	20.0
Teucrium chamaedrys	20.0	Poa bulbosa	20.0
Urginea maritima	18.0	Centaurea raphanina	17.0
Brachypodium retusum	17.0	Asparagus acutifolius	17.0
Stipa bromoides	15.0	Pistacia lentiscus	15.0
Eryngium campestre	15.0	Cerastium brachypetalum	15.0

Trifolium campestre	14.0	Hypericum empetrifolium	14.0
Daphne oleoides	14.0	Acer monspessulanum	14.0
Prasium majus	12.0	Pinus brutia	12.0
Phlomis fruticosa	12.0	Geranium purpureum	12.0
Festuca jeanpertia	12.0	Cistus salvifolius	12.0
Ceterach officinarum	12.0	Campanula spatulata	12.0
Thymus longicaulis	11.0	Stipa pennata	11.0
Salvia triloba	11.0	Rhamnus lycioides	11.0
Quercus pubescens	11.0	Olea europaea var. sylvestris	11.0
Micromeria juliana	11.0	Koeleria vallesiana	11.0
Crepis fraasii	11.0	Carlina corymbosa	11.0
Calicotome villosa	11.0	Astragalus creticus	11.0
Asphodelus ramosus	11.0	Aethionema saxatile	11.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Cupressus sempervirens	41.0	Juniperus foetidissima	23.0
Juniperus thurifera	20.0	Pinus brutia	9.0
Juniperus oxycedrus	9.0	Juniperus excelsa	8.0
Juniperus drupacea	6.0		

G3.A - Picea taiga woodland

*Diagnostic species (phi coefficient * 100)*

Brachythecium oedipodium	72.5	Trientalis europaea	54.6
Plagiothecium curvifolium	50.2	Dicranum polysetum	46.7
Eurhynchium angustirete	44.2	Pleurozium schreberi	39.7
Hylocomium splendens	39.6	Ptilium crista-castrensis	39.3
Maianthemum bifolium	38.8	Luzula pilosa	38.7
Lycopodium annotinum	36.3	Plagiomnium affine	35.5
Lophocolea heterophylla	34.2	Tetraphis pellucida	34.1
Rubus saxatilis	32.9	Picea abies	31.5
Calamagrostis arundinacea	30.3	Dicranum majus	30.0
Picea obovata	29.1	Goodyera repens	29.0
Sorbus aucuparia	28.6	Vaccinium myrtillus	28.0
Sphagnum girgensohnii	27.7	Dryopteris carthusiana	27.1
Herzogiella seligeri	26.9	Abies sibirica	26.8
Dryopteris expansa	26.7	Vaccinium vitis-idaea	26.5
Plagiothecium laetum	26.4	Betula pubescens	25.6
Oxalis acetosella	25.4	Frangula alnus	24.9
Pinus sylvestris	24.7	Dicranum fuscescens	24.5
Aconitum septentrionale	24.4	Dicranum scoparium	23.7
Viola epipsila	23.6	Rubus idaeus	22.9
Cirriphyllum piliferum	22.9	Parmeliopsis hyperopta	22.1
Brachythecium reflexum	21.7	Usnea subfloridana	20.8
Hypogymnia tubulosa	20.4	Rhytidiadelphus triquetrus	20.2
Equisetum sylvaticum	20.1	Linnaea borealis	20.0
Vulpicidia pinastri	19.7	Rhytidiadelphus subpinnatus	19.6

Quercus robur	19.5	Pseudevernia furfuracea	19.4
Melampyrum pratense	19.4	Gymnocarpium dryopteris	18.8
Bryoria capillaris	18.7	Rhodobryum roseum	18.7
Circaea alpina	18.7	Hieracium pseudirectum	18.6
Hypogymnia bitteri	18.2	Dicranum montanum	17.6
Brachythecium starkei	17.5	Populus tremula	17.4
Diplazium sibiricum	17.2	Sanionia uncinata	17.1
Viola selkirkii	16.8	Orthodicranum montanum	16.7
Parmelia sulcata	16.5	Evernia mesomorpha	16.5
Solidago virgaurea	16.4	Carex digitata	16.4
Calamagrostis purpurea	16.4	Mycelis muralis	16.1
Cacalia hastata	16.1	Melica nutans	15.9
Betula pendula	15.4	Parmelia saxatilis	15.3
Lepidozia reptans	15.3	Hieracium jaccardi	15.3
Phegopteris connectilis	15.2		

Constant species (occurrence frequencies)

Sorbus aucuparia	87.0	Picea abies	87.0
Vaccinium myrtillus	85.0	Pleurozium schreberi	84.0
Maianthemum bifolium	76.0	Hylocomium splendens	75.0
Oxalis acetosella	72.0	Luzula pilosa	71.0
Trientalis europaea	70.0	Pinus sylvestris	65.0
Brachythecium oedipodium	64.0	Frangula alnus	58.0
Rubus idaeus	56.0	Dryopteris carthusiana	56.0
Quercus robur	55.0	Dicranum scoparium	54.0
Vaccinium vitis-idaea	52.0	Plagiomnium affine	51.0
Calamagrostis arundinacea	50.0	Betula pubescens	48.0
Rubus saxatilis	46.0	Dicranum polysetum	46.0
Solidago virgaurea	42.0	Corylus avellana	41.0
Betula pendula	39.0	Plagiothecium curvifolium	35.0
Mycelis muralis	35.0	Melampyrum pratense	35.0
Eurhynchium angustirete	34.0	Rhytidiadelphus triquetrus	31.0
Ptilium crista-castrensis	31.0	Lycopodium annotinum	31.0
Populus tremula	30.0	Fragaria vesca	30.0
Melica nutans	29.0	Polytrichastrum formosum	28.0
Lophocolea heterophylla	28.0	Carex digitata	28.0
Athyrium filix-femina	27.0	Pteridium aquilinum	26.0
Deschampsia flexuosa	24.0	Viola riviniana	23.0
Equisetum sylvaticum	23.0	Dryopteris dilatata	23.0
Gymnocarpium dryopteris	22.0	Tetraphis pellucida	21.0
Paris quadrifolia	19.0	Goodyera repens	19.0
Dicranum majus	19.0	Convallaria majalis	19.0
Cirriphyllum piliferum	19.0	Sphagnum girgensohnii	18.0
Orthilia secunda	17.0	Milium effusum	17.0
Plagiothecium laetum	16.0	Moehringia trinervia	16.0
Lysimachia vulgaris	16.0	Hypnum cupressiforme	16.0
Stellaria holostea	15.0	Lonicera xylosteum	15.0
Dryopteris filix-mas	15.0	Daphne mezereum	15.0

Stellaria nemorum	14.0	Sphagnum capillifolium	14.0
Equisetum pratense	14.0	Epilobium angustifolium	14.0
Dryopteris expansa	14.0	Dicranum fuscescens	14.0
Acer platanoides	14.0	Plagiochila asplenioides	13.0
Molinia caerulea agg.	13.0	Lamiastrum galeobdolon	13.0
Deschampsia cespitosa	13.0	Anemone nemorosa	13.0
Alnus glutinosa	13.0	Viburnum opulus	12.0
Picea obovata	12.0	Phegopteris connectilis	12.0
Lathyrus vernus	12.0	Herzogiella seligeri	12.0
Crepis paludosa	12.0	Aegopodium podagraria	12.0
Abies sibirica	12.0	Veronica officinalis	11.0
Polytrichum commune	11.0	Linnaea borealis	11.0
Geum rivale	11.0	Circaea alpina	11.0
Actaea spicata	11.0	Aconitum septentrionale	11.0
Viola epipsila	10.0	Juniperus communis subsp. communis	10.0
Carex curta	10.0	Agrostis capillaris	10.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Picea abies	87.0	Hylocomium splendens	26.0
Vaccinium myrtillus	25.0	Pinus sylvestris	25.0
Pleurozium schreberi	23.0	Oxalis acetosella	20.0
Picea obovata	12.0	Maianthemum bifolium	5.0

G3.B - Pinus sylvestris taiga woodland

*Diagnostic species (phi coefficient * 100)*

Empetrum nigrum subsp. hermaphroditum	51.7	Vulpicidia pinastri	46.5
Ptilidium pulcherrimum	45.4	Picea obovata	43.5
Orthodicranum montanum	43.2	Parmelia sulcata	42.9
Evernia mesomorpha	41.6	Abies sibirica	41.4
Vaccinium vitis-idaea	39.6	Hypnum pallescens	38.5
Pinus sylvestris	38.1	Hypogymnia physodes	37.5
Pseudevernia furfuracea	36.6	Seseli krylovii	34.3
Parmeliopsis hyperopta	34.0	Hypocenomyce scalaris	33.4
Betula pubescens	32.9	Ptilium crista-castrensis	31.9
Usnea subfloridana	30.4	Sanionia uncinata	29.7
Carex pediformis	29.6	Adenophora lilifolia	29.6
Cerastium pauciflorum	29.4	Imshaugia aleurites	29.0
Linnaea borealis	28.5	Rosa majalis	27.9
Parmeliopsis ambigua	27.8	Orthodicranum flagellare	27.7
Callicladium haldanianum	27.3	Hieracium onegense	26.4
Euphorbia subcordata	26.4	Usnea hirta	26.3
Pleurospermum uralense	25.2	Viola collina	24.8
Paraleucobryum longifolium	24.8	Dicranum polysetum	24.6
Lecanora allophana	24.0	Platygyrium repens	23.2

Buellia punctata	23.1	Cladonia cenotea	22.9
Rubus saxatilis	22.4	Bupleurum longifolium	21.7
Digitalis grandiflora	21.1	Graphis scripta	20.9
Hylotelephium triphyllum	20.7	Orthilia secunda	20.5
Hieracium subpellucidum	20.5	Cladonia coniocraea	20.3
Physconia detersea	20.2	Vaccinium uliginosum	19.6
Lathyrus pisiformis	19.6	Hypogymnia bitteri	19.5
Pleurozium schreberi	19.2	Geranium sylvaticum	19.2
Lecanora symmicta	19.1	Pylaisiella polyantha	19.1
Trientalis europaea	19.0	Vicia sylvatica	18.9
Calamagrostis lapponica	18.9	Cladonia fimbriata	18.7
Vaccinium myrtillus	18.3	Brachythecium reflexum	18.3
Dicranum fuscescens	18.2	Cladonia amaurocraea	18.0
Pulmonaria mollis	17.9	Calamagrostis arundinacea	17.4
Galium boreale	17.2	Hylocomium splendens	16.5
Melanelia olivacea	16.2	Cirsium helenioides	16.1
Pyrola rotundifolia	15.9	Hieracium umbellatum	15.4
Dichelyma falcatum	15.4	Bryoria furcellata	15.4
Clematis alpina	15.3	Pyrola grandiflora	15.2
Flavoparmelia soledians	15.2	Atrichum flavisetum	15.1
Caloplaca cerina	15.0	Bryoria simplicior	15.0

Constant species (occurrence frequencies)

Pinus sylvestris	100.0	Vaccinium vitis-idaea	79.0
Betula pubescens	62.0	Vaccinium myrtillus	57.0
Empetrum nigrum subsp. hermaphroditum	48.0	Pleurozium schreberi	40.0
Solidago virgaurea	36.0	Deschampsia flexuosa	36.0
Rubus saxatilis	31.0	Hylocomium splendens	31.0
Vulpicidia pinastri	29.0	Hypogymnia physodes	29.0
Sorbus aucuparia	29.0	Calamagrostis arundinacea	29.0
Parmelia sulcata	26.0	Vaccinium uliginosum	26.0
Ptilidium pulcherrimum	26.0	Orthodicranum montanum	26.0
Melica nutans	26.0	Luzula pilosa	26.0
Geranium sylvaticum	26.0	Fragaria vesca	26.0
Ptilium crista-castrensis	24.0	Picea obovata	24.0
Orthilia secunda	24.0	Melampyrum pratense	24.0
Galium boreale	24.0	Evernia mesomorpha	24.0
Brachypodium pinnatum	24.0	Abies sibirica	24.0
Trientalis europaea	21.0	Lathyrus vernus	21.0
Hieracium umbellatum	21.0	Dicranum polysetum	21.0
Pseudevernia furfuracea	19.0	Viola collina	19.0
Viola canina	19.0	Succisa pratensis	19.0
Maianthemum bifolium	19.0	Hypnum pallescens	19.0
Digitalis grandiflora	19.0	Dicranum scoparium	19.0
Carex pediformis	19.0	Stellaria holostea	17.0
Stachys officinalis	17.0	Sanionia uncinata	17.0
Rosa majalis	17.0	Quercus robur	17.0

Linnaea borealis	17.0	Juniperus communis subsp. communis	17.0
Parmeliopsis hyperopta	14.0	Tilia cordata	14.0
Seseli krylovii	14.0	Potentilla erecta	14.0
Polygonatum odoratum	14.0	Aegopodium podagraria	14.0
Adenophora lilifolia	14.0	Usnea subfloridana	12.0
Parmeliopsis ambigua	12.0	Hypocenomyce scalaris	12.0
Vicia sylvatica	12.0	Veronica chamaedrys	12.0
Pulmonaria mollis	12.0	Picea abies	12.0
Paraleucobryum longifolium	12.0	Cladonia fimbriata	12.0
Cerastium pauciflorum	12.0	Usnea hirta	10.0
Imshaugia aleurites	10.0	Viola mirabilis	10.0
Pyrola rotundifolia	10.0	Poa nemoralis	10.0
Pleurospermum uralense	10.0	Orthodicranum flagellare	10.0
Lathyrus pisiformis	10.0	Chamaecytisus ruthenicus	10.0
Hylotelephium triphyllum	10.0	Festuca ovina	10.0
Euphorbia subcordata	10.0	Empetrum nigrum	10.0
Dicranum fuscescens	10.0	Clematis alpina	10.0
Cladonia coniocraea	10.0	Cladonia arbuscula	10.0
Cirsium helenioides	10.0	Callicladium haldanianum	10.0
Bupleurum longifolium	10.0	Betula pendula	10.0
Antennaria dioica	10.0	Achillea millefolium	10.0
Acer platanoides	10.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Pinus sylvestris	67.0	Empetrum nigrum subsp. hermaphroditum	19.0
Vaccinium vitis-idaea	17.0	Pleurozium schreberi	17.0
Vaccinium myrtillus	10.0		

G3.C - Larix sibirica taiga woodland

*Diagnostic species (phi coefficient * 100)*

Hypocenomyce scalaris	99.6	Stellaria bungeana	99.2
Larix sibirica	98.5	Valeriana wolgensis	98.2
Hieracium pseudirectum	98.0	Cladonia digitata	98.0
Cicerbita uralensis	97.8	Cacalia hastata	97.4
Hypogymnia tubulosa	96.9	Pseudevernia furfuracea	96.3
Brachythecium reflexum	96.3	Evernia mesomorpha	95.9
Vulpicidia pinastri	95.7	Abies sibirica	95.7
Orthodicranum montanum	95.1	Parmelia sulcata	95.0
Aconogonon alpinum	94.1	Sanionia uncinata	93.5
Hypogymnia physodes	88.1	Veratrum lobelianum	87.4
Mnium laevinerve	81.4	Usnea glabrata	81.3
Lecanora symmicta	80.7	Lecanora allophana	80.5
Buellia punctata	80.1	Cladonia cenotea	80.0
Hylocomiastrum pyrenaicum	79.8	Parmeliopsis hyperopta	79.5

Lathyrus gmelinii	79.5	Usnea hirta	79.4
Picea obovata	78.0	Ptilidium pulcherrimum	77.5
Aconitum septentrionale	76.8	Myosotis sylvatica	75.7
Crepis sibirica	75.6	Dryopteris expansa	74.8
Campanula latifolia	74.2	Brachythecium oedipodium	72.9
Plagiothecium laetum	70.5	Cirsium helenioides	69.9
Clematis alpina	68.7	Pulmonaria mollis	67.5
Lophocolea heterophylla	65.0	Geranium sylvaticum	63.9
Rubus saxatilis	63.4	Plagiothecium denticulatum	63.2
Cirriphyllum piliferum	62.4	Ochrolechia pallescens	57.5
Chaenotheca chrysocephala	57.5	Calicium viride	57.5
Bryoria bicolor	57.5	Cladonia corallifera	57.5
Bryoria kuemmerleana	57.5	Usnea barbata	57.4
Pertusaria amara	57.4	Buellia disciformis	57.4
Melanelia subaurifera	57.4	Cladonia bacilliformis	57.4
Physcia aipolia	57.3	Melanelia septentrionalis	57.3
Sorbus sibirica	57.1	Usnea filipendula	57.0
Melanelia exasperatula	57.0	Bryoria fuscescens	56.8
Bryoria capillaris	56.8	Calamagrostis obtusata	56.7
Calamagrostis arundinacea	56.5	Pylaisiella polyantha	56.4
Ochrolechia tartarea	56.2	Cladonia humilis	56.2
Rhytidiadelphus subpinnatus	55.7	Lophocolea minor	55.7
Usnea subfloridana	54.8	Conioselinum tataricum	54.8
Viola mirabilis	54.6	Lathyrus vernus	54.5
Brachythecium starkei	54.4	Paris quadrifolia	54.2
Cerastium pauciflorum	54.1	Hypnum pallescens	53.3
Trientalis europaea	51.9	Cladonia cornuta	51.6
Betula pubescens	51.3	Bupleurum longifolium	50.8
Paraleucobryum longifolium	50.0	Milium effusum	49.8
Primula macrocalyx	49.2	Cladonia coniocraea	49.2
Pyrola minor	46.2	Brachythecium salebrosum	45.5
Stellaria holostea	45.4	Epilobium angustifolium	44.8
Circaea alpina	43.8	Dicranum scoparium	43.7
Aegopodium podagraria	43.1	Cladonia fimbriata	42.6
Hypericum maculatum	42.0	Bistorta officinalis	41.8
Ptilium crista-castrensis	41.3	Rubus idaeus	40.9
Plagiomnium cuspidatum	40.5	Epilobium montanum	39.8
Brachytheciastrum velutinum	38.8	Dryopteris filix-mas	38.5
Filipendula ulmaria	37.0	Brachypodium pinnatum	36.9
Melica nutans	36.3	Cladonia pyxidata	36.0
Oxalis acetosella	35.3	Senecio nemorensis	35.1
Galeopsis bifida	32.7	Angelica sylvestris	29.0
Campanula glomerata	27.6	Solidago virgaurea	26.8
Athyrium filix-femina	26.3	Carex pilosa	25.9
Actaea spicata	25.9	Sorbus aucuparia	21.4
Ranunculus acris	19.0	Dactylis glomerata	15.9

Constant species (occurrence frequencies)

Vulpicidia pinastri	100.0	Pseudevernia furfuracea	100.0
Parmelia sulcata	100.0	Hypogymnia tubulosa	100.0
Hypogymnia physodes	100.0	Hypocenomyce scalaris	100.0
Veratrum lobelianum	100.0	Valeriana wolgensis	100.0
Stellaria holostea	100.0	Stellaria bungeana	100.0
Sanionia uncinata	100.0	Rubus saxatilis	100.0
Rubus idaeus	100.0	Paris quadrifolia	100.0
Oxalis acetosella	100.0	Orthodicranum montanum	100.0
Myosotis sylvatica	100.0	Milium effusum	100.0
Lathyrus vernus	100.0	Larix sibirica	100.0
Hieracium pseudirectum	100.0	Geranium sylvaticum	100.0
Filipendula ulmaria	100.0	Evernia mesomorpha	100.0
Dryopteris filix-mas	100.0	Dicranum scoparium	100.0
Cladonia digitata	100.0	Cicerbita uralensis	100.0
Calamagrostis arundinacea	100.0	Cacalia hastata	100.0
Brachythecium reflexum	100.0	Brachypodium pinnatum	100.0
Betula pubescens	100.0	Aegopodium podagraria	100.0
Aconogonon alpinum	100.0	Abies sibirica	100.0
Usnea hirta	67.0	Usnea glabrata	67.0
Parmeliopsis hyperopta	67.0	Lecanora symmicta	67.0
Lecanora allophana	67.0	Viola mirabilis	67.0
Trientalis europaea	67.0	Sorbus aucuparia	67.0
Solidago virgaurea	67.0	Senecio nemorensis	67.0
Ranunculus acris	67.0	Pulmonaria mollis	67.0
Ptilidium pulcherrimum	67.0	Plagiothecium laetum	67.0
Plagiothecium denticulatum	67.0	Picea obovata	67.0
Mnium laevinerve	67.0	Melica nutans	67.0
Lophocolea heterophylla	67.0	Lathyrus gmelinii	67.0
Hypericum maculatum	67.0	Hylocomiastrum pyrenaicum	67.0
Epilobium montanum	67.0	Epilobium angustifolium	67.0
Dryopteris expansa	67.0	Dactylis glomerata	67.0
Crepis sibirica	67.0	Clematis alpina	67.0
Cladonia cenotea	67.0	Cirsium helenioides	67.0
Cirriphyllum piliferum	67.0	Campanula latifolia	67.0
Buellia punctata	67.0	Brachythecium oedipodium	67.0
Bistorta officinalis	67.0	Athyrium filix-femina	67.0
Angelica sylvestris	67.0	Aconitum septentrionale	67.0
Usnea subfloridana	33.0	Usnea filipendula	33.0
Usnea barbata	33.0	Physcia aipolia	33.0
Pertusaria amara	33.0	Ochrolechia tartarea	33.0
Ochrolechia pallescens	33.0	Chaenotheca chrysocephala	33.0
Calicium viride	33.0	Buellia disciformis	33.0
Bryoria fuscescens	33.0	Bryoria capillaris	33.0
Bryoria bicolor	33.0	Stachys sylvatica	33.0
Sorbus sibirica	33.0	Rhytidiadelphus triquetrus	33.0
Rhytidiadelphus subpinnatus	33.0	Pyrola minor	33.0
Pylaisiella polyantha	33.0	Ptilium crista-castrensis	33.0
Primula macrocalyx	33.0	Pleurozium schreberi	33.0

Plagiomnium cuspidatum	33.0	Paraleucobryum longifolium	33.0
Melanelia subaurifera	33.0	Melanelia septentrionalis	33.0
Melanelia exasperatula	33.0	Maianthemum bifolium	33.0
Luzula pilosa	33.0	Lophocolea minor	33.0
Hypnum pallescens	33.0	Geum rivale	33.0
Galeopsis bifida	33.0	Conioselinum tataricum	33.0
Cladonia pyxidata	33.0	Cladonia humilis	33.0
Cladonia fimbriata	33.0	Cladonia cornuta	33.0
Cladonia corallifera	33.0	Cladonia coniocraea	33.0
Cladonia bacilliformis	33.0	Circaea alpina	33.0
Cerastium pauciflorum	33.0	Carex pilosa	33.0
Campanula glomerata	33.0	Calamagrostis obtusata	33.0
Bupleurum longifolium	33.0	Bryoria kuemmerleana	33.0
Brachythecium starkei	33.0	Brachythecium salebrosum	33.0
Brachytheciastrium velutinum	33.0	Anthriscus sylvestris	33.0
Actaea spicata	33.0		

Dominant species (percentage frequencies of occurrences with cover > 25%)

Larix sibirica	100.0	Oxalis acetosella	67.0
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G3.Da - Pinus bog woodland

*Diagnostic species (phi coefficient * 100)*

Eriophorum vaginatum	42.2	Ledum palustre	41.9
Vaccinium oxycoccos	39.5	Sphagnum magellanicum	39.4
Vaccinium uliginosum	38.2	Polytrichum strictum	36.1
Sphagnum fallax	30.2	Pinus mugo	30.2
Andromeda polifolia	29.0	Sphagnum capillifolium	28.4
Pinus sylvestris	28.0	Vaccinium vitis-idaea	24.6
Pleurozium schreberi	23.6	Aulacomnium palustre	23.4
Pinus uncinata var. rotundata	22.9	Sphagnum fuscum	21.9
Betula pubescens	21.5	Vaccinium myrtillus	20.7
Sphagnum angustifolium	20.2	Drosera rotundifolia	19.5
Calluna vulgaris	18.6	Dicranum polysetum	17.5
Sphagnum russowii	17.1	Polytrichum commune	16.7
Empetrum nigrum	16.6	Vaccinium microcarpum	15.8
Sphagnum girgensohnii	15.8	Sphagnum rubellum	15.5
Chamaedaphne calyculata	15.1		

Constant species (occurrence frequencies)

Pinus sylvestris	73.0	Vaccinium myrtillus	64.0
Eriophorum vaginatum	61.0	Vaccinium oxycoccos	54.0
Vaccinium uliginosum	52.0	Calluna vulgaris	52.0
Pleurozium schreberi	49.0	Vaccinium vitis-idaea	48.0
Sphagnum magellanicum	42.0	Molinia caerulea agg.	40.0
Betula pubescens	40.0	Picea abies	36.0
Polytrichum strictum	35.0	Andromeda polifolia	35.0

Aulacomnium palustre	33.0	Ledum palustre	32.0
Sphagnum capillifolium	29.0	Sphagnum fallax	28.0
Drosera rotundifolia	26.0	Pinus mugo	24.0
Hylocomium splendens	24.0	Betula pendula	23.0
Polytrichum commune	22.0	Frangula alnus	22.0
Dicranum scoparium	21.0	Deschampsia flexuosa	17.0
Carex nigra	17.0	Sorbus aucuparia	16.0
Melampyrum pratense	16.0	Sphagnum angustifolium	15.0
Potentilla erecta	15.0	Eriophorum angustifolium	15.0
Empetrum nigrum	15.0	Dicranum polysetum	14.0
Sphagnum fuscum	13.0	Quercus robur	12.0
Sphagnum palustre	11.0	Sphagnum rubellum	10.0
Rubus chamaemorus	10.0	Polytrichastrum formosum	10.0
Dryopteris carthusiana	10.0	Carex rostrata	10.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Pinus sylvestris	46.0	Vaccinium myrtillus	24.0
Pinus mugo	20.0	Sphagnum fallax	14.0
Eriophorum vaginatum	14.0	Sphagnum capillifolium	13.0
Sphagnum magellanicum	12.0	Pleurozium schreberi	10.0
Calluna vulgaris	10.0	Vaccinium uliginosum	9.0
Molinia caerulea agg.	7.0	Ledum palustre	7.0
Vaccinium oxycoccos	5.0		

G3.Db - Picea bog woodland

*Diagnostic species (phi coefficient * 100)*

Sphagnum girgensohnii	52.5	Picea abies	35.9
Bazzania trilobata	35.9	Polytrichum commune	32.9
Calamagrostis villosa	31.9	Vaccinium vitis-idaea	31.2
Vaccinium myrtillus	30.4	Lycopodium annotinum	26.1
Sphagnum magellanicum	24.3	Lepidozia reptans	23.7
Sphagnum capillifolium	23.5	Plagiothecium undulatum	22.5
Listera cordata	22.1	Sphagnum russowii	21.8
Pleurozium schreberi	21.7	Dicranodontium denudatum	21.2
Tetraphis pellucida	19.8	Eriophorum vaginatum	19.7
Dicranum scoparium	19.7	Calypogeia azurea	19.5
Calypogeia integristipula	19.1	Hylocomium splendens	19.0
Trientalis europaea	17.6	Equisetum sylvaticum	16.7
Vaccinium uliginosum	16.6	Ptilium crista-castrensis	16.5
Rhytidiadelphus loreus	15.3	Homogyne alpina	15.1
Polytrichastrum formosum	15.0		

Constant species (occurrence frequencies)

Picea abies	98.0	Vaccinium myrtillus	91.0
Vaccinium vitis-idaea	61.0	Sorbus aucuparia	45.0
Polytrichum commune	45.0	Pleurozium schreberi	45.0

Dicranum scoparium	45.0	Sphagnum girgensohnii	41.0
Deschampsia flexuosa	36.0	Hylocomium splendens	35.0
Calamagrostis villosa	33.0	Polytrichastrum formosum	32.0
Oxalis acetosella	30.0	Eriophorum vaginatum	28.0
Dryopteris dilatata	28.0	Maianthemum bifolium	26.0
Sphagnum magellanicum	24.0	Sphagnum capillifolium	24.0
Molinia caerulea agg.	24.0	Betula pubescens	24.0
Bazzania trilobata	24.0	Vaccinium uliginosum	22.0
Carex nigra	22.0	Lycopodium annotinum	21.0
Trientalis europaea	19.0	Pinus sylvestris	19.0
Homogyne alpina	19.0	Equisetum sylvaticum	19.0
Carex echinata	19.0	Abies alba	19.0
Plagiothecium undulatum	18.0	Dryopteris carthusiana	18.0
Calluna vulgaris	18.0	Vaccinium oxycoccos	16.0
Rhytidiadelphus loreus	16.0	Potentilla erecta	16.0
Luzula pilosa	16.0	Frangula alnus	16.0
Carex curta	15.0	Athyrium filix-femina	15.0
Deschampsia cespitosa	14.0	Aulacomnium palustre	14.0
Sphagnum palustre	13.0	Rhytidiadelphus triquetrus	13.0
Melampyrum pratense	13.0	Lepidozia reptans	13.0
Sphagnum russowii	12.0	Sphagnum fallax	12.0
Ptilium crista-castrensis	11.0	Luzula sylvatica	11.0
Listera cordata	11.0	Tetraphis pellucida	10.0
Rubus idaeus	10.0	Polytrichum strictum	10.0
Pohlia nutans	10.0	Plagiochila asplenioides	10.0
Melampyrum sylvaticum	10.0	Fagus sylvatica	10.0
Dicranum polysetum	10.0	Dicranodontium denudatum	10.0
Blechnum spicant	10.0	Betula pendula	10.0

Dominant species (percentage frequencies of occurrences with cover > 25%)

Picea abies	81.0	Vaccinium myrtillus	39.0
Sphagnum girgensohnii	26.0	Sphagnum capillifolium	13.0
Sphagnum magellanicum	10.0	Calamagrostis villosa	9.0
Polytrichum commune	7.0	Sphagnum fallax	6.0
Eriophorum vaginatum	6.0		

