

*Linking in situ vegetation data to the EUNIS habitat classification: results for forest habitats*

## Annex 3

Annex 3 contains the data sheets with the results of the review for each EUNIS forest habitat type.

### EUNIS forest habitat types – names follows current version (2007)

- B1.7 Coastal dune woods
- G1.1 Riparian and gallery woodland, with dominant [Alnus], [Betula], [Populus] or [Salix]
- G1.2 Mixed riparian floodplain and gallery woodland
- G1.3 Mediterranean riparian woodland
- G1.4 Broadleaved swamp woodland not on acid peat
- G1.5 Broadleaved swamp woodland on acid peat
- G1.6 [Fagus] woodland
- G1.7 Thermophilous deciduous woodland
- G1.8 Acidophilous [Quercus]-dominated woodland
- G1.9 Non-riverine woodland with [Betula], [Populus tremula] or [Sorbus aucuparia]
- G1.A Meso- and eutrophic [Quercus], [Carpinus], [Fraxinus], [Acer], [Tilia], [Ulmus] and related woodland
- G1.B Non-riverine [Alnus] woodland
- G1.C Highly artificial broadleaved deciduous forestry plantations
- G1.D Fruit and nut tree orchards
- G2.1 Mediterranean evergreen [Quercus] woodland
- G2.2 Eurasian continental sclerophyllous woodland
- G2.3 Macaronesian [Laurus] woodland
- G2.4 [Olea europaea] - [Ceratonia siliqua] woodland
- G2.5 - [Phoenix] groves
- G2.6 [Ilex aquifolium] woods
- G2.7 Canary Island heath woodland
- G2.8 Highly artificial broadleaved evergreen forestry plantations
- G2.9 Evergreen orchards and groves
- G3.1 [Abies] and [Picea] woodland
- G3.2 Alpine [Larix] - [Pinus cembra] woodland

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- G3.3 [Pinus uncinata] woodland
- G3.4 [Pinus sylvestris] woodland south of the taiga
- G3.5 [Pinus nigra] woodland
- G3.6 - Subalpine mediterranean [Pinus] woodland
- G3.7 Lowland to montane mediterranean [Pinus] woodland (excluding [Pinus nigra])
- G3.8 Canary Island [Pinus canariensis] woodland
- G3.9 Coniferous woodland dominated by [Cupressaceae] or [Taxaceae]
- G3.A [Picea] taiga woodland
- G3.B [Pinus] taiga woodland
- G3.C [Larix] taiga woodland
- G3.D Boreal bog conifer woodland
- G3.E Nemoral bog conifer woodland

Not covered by in-situ vegetation data are G1.D 'Fruit and nut tree orchards', G2.8 'Highly artificial broadleaved evergreen forestry plantations', G 2.9 'Evergreen orchards and groves', and G3.C '[Larix] taiga woodland', as these units are no woodlands (G1.D, G2.9), floristically difficult to define and/or to assign to syntaxa (G.2.8) or because there are no data available (G3.C).

In the tables of the floristic composition of the individual EUNIS types, all species with a frequency > 10 % are mentioned. The full species lists will be provided electronically.

*Linking in situ vegetation data to the EUNIS habitat classification: results for forest habitats***B1.7 - Coastal dune woods**

**European Forest Type:** 2.7 Atlantic Maritime pine forest

**Origin of data (countries):** DE, FR, GB, GR, HR, IT, NL, PL

**List of alliances:** FAG-02A, FAG-05D, PIC-02A, POP-02A, QUI-01A, QUI-01G, QUI-02E, QUI-03A, ROB-01C

**Additional selection rules:** Of the listed alliances, only relevés occurring in coastal areas were used

**Implications for EUNIS classification:** proposed new name: Coastal dune woodland

**Implications for EFT classification:** n/a

**Floristic composition:**

Quercus robur	40	Asparagus acutifolius	16
Acer pseudoplatanus	38	Betula pubescens	16
Crataegus monogyna agg.	33	Silene dioica	16
Urtica dioica	31	Rubus caesius	15
Hedera helix	30	Corylus avellana	14
Sorbus aucuparia	30	Pistacia lentiscus	14
Fraxinus excelsior	27	Pteridium aquilinum	14
Eurhynchium praelongum	24	Hyacinthoides non-scripta	13
Lonicera periclymenum	23	Ilex aquifolium	13
Dryopteris carthusiana agg.	21	Moehringia trinervia	13
Fagus sylvatica	21	Oxalis acetosella	13
Glechoma hederacea agg.	21	Poa trivialis	13
Sambucus nigra	21	Betula pendula	12
Geum urbanum	20	Holcus mollis	12
Rubus fruticosus agg.	20	Alliaria petiolata	11
Brachythecium rutabulum	19	Alnus glutinosa	11
Galium aparine	19	Calamagrostis epigejos	11
Geranium robertianum	19	Deschampsia flexuosa	11
Mnium hornum	18	Euonymus europaeus	11

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Quercus ilex subsp. Ilex	18	Prunus serotina	11
Rubia peregrina	17	Agrostis capillaris	10
Smilax aspera	17	Dactylis glomerata agg.	10

*Linking in situ vegetation data to the EUNIS habitat classification: results for forest habitats***G1.1 - Riparian and gallery woodland, with dominant [Alnus], [Betula], [Populus] or [Salix]****European Forest Type:** 12.1 Riparian forest**Origin of data (countries):** AT, CZ, DE, ES, FR, GB, GR, HR, HU, IT, NL, PL, RO, RU, SI, SK, SM**List of alliances:** POP-02A, POP-02B, PUR-01C**Additional selection rules:** Relevés of alliance POP-02A with occurrence of *Fraxinus angustifolia* (and any of its subspecies) and relevés with a cover of *Quercus robur* > 50% were excluded**Implications for EUNIS classification:** proposed new name: Temperate and boreal softwood riparian woodland**Implications for EFT classification:** n/a**Floristic composition:**

<i>Urtica dioica</i>	63	<i>Brachythecium rutabulum</i>	16
<i>Fraxinus excelsior</i>	47	<i>Sorbus aucuparia</i>	16
<i>Alnus glutinosa</i>	39	<i>Hedera helix</i>	15
<i>Galium aparine</i>	36	<i>Solanum dulcamara</i>	15
<i>Sambucus nigra</i>	34	<i>Plagiomnium undulatum</i>	15
<i>Glechoma hederacea</i> agg.	33	<i>Cirsium oleraceum</i>	14
<i>Rubus caesius</i>	32	<i>Eurhynchium praelongum</i>	14
<i>Geum urbanum</i>	30	<i>Lamiastrum galeobdolon</i> agg.	14
<i>Aegopodium podagraria</i>	29	<i>Ajuga reptans</i>	14
<i>Acer pseudoplatanus</i>	29	<i>Viburnum opulus</i>	14
<i>Poa trivialis</i>	28	<i>Lysimachia vulgaris</i>	13
<i>Crataegus monogyna</i> agg.	28	<i>Alliaria petiolata</i>	13
<i>Deschampsia cespitosa</i>	25	<i>Rubus fruticosus</i> agg.	13
<i>Corylus avellana</i>	25	<i>Silene dioica</i>	12
<i>Stachys sylvatica</i>	24	<i>Lamium maculatum</i>	12
<i>Quercus robur</i>	23	<i>Anthriscus sylvestris</i>	12
<i>Ranunculus repens</i>	23	<i>Carex remota</i>	12

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Brachypodium sylvaticum	22	Moehringia trinervia	12
Geranium robertianum	22	Dactylis glomerata agg.	12
Prunus padus	22	Caltha palustris	12
Angelica sylvestris	22	Heracleum sphondylium	12
Impatiens noli-tangere	22	Acer campestre	12
Filipendula ulmaria	21	Chaerophyllum hirsutum	12
Athyrium filix-femina	20	Fagus sylvatica	12
Cornus sanguinea	20	Lycopus europaeus	11
Dryopteris carthusiana agg.	20	Carex sylvatica	11
Circaea lutetiana	19	Galeopsis tetrahit	11
Humulus lupulus	19	Paris quadrifolia	11
Ranunculus ficaria	19	Iris pseudacorus	10
Alnus incana	19	Phragmites australis	10
Oxalis acetosella	19	Myosotis scorpioides agg.	10
Festuca gigantea	18	Poa nemoralis	10
Euonymus europaeus	18	Asarum europaeum	10
Phalaris arundinacea	17	Equisetum arvense	10
Salix alba	17	Impatiens parviflora	10
Anemone nemorosa	16	Picea abies	10
Rubus idaeus	16	Symphytum officinale	10

## G1.2 - Mixed riparian floodplain and gallery woodland

**European Forest Type:** 12.2 Fluvial forest

**Origin of data (countries):** AT, CZ, DE, ES, FR, GB, GR, HR, HU, IT, NL, PL, RO, RU, SI, SK

**List of alliances:** POP-02A, POP-02C

**Additional selection rules:** Relevés of alliance POP-02A with occurrence of *Alnus incana* and relevés with a cover of *Alnus glutinosa*, *Populus alba*, *P. nigra*, *Salix alba* or *S. fragilis* > 25% were excluded

**Implications for EUNIS classification:** proposed new name: Temperate and boreal hardwood riparian woodland

**Implications for EFT classification:** n/a

### Floristic composition:

<i>Urtica dioica</i>	59	<i>Brachythecium rutabulum</i>	17
<i>Fraxinus excelsior</i>	58	<i>Lonicera periclymenum</i>	17
<i>Crataegus monogyna</i> agg.	56	<i>Festuca gigantea</i>	17
<i>Quercus robur</i>	51	<i>Carex remota</i>	16
<i>Geum urbanum</i>	42	<i>Ulmus minor</i>	16
<i>Glechoma hederacea</i> agg.	42	<i>Angelica sylvestris</i>	16
<i>Sambucus nigra</i>	40	<i>Polygonatum multiflorum</i>	16
<i>Galium aparine</i>	37	<i>Oxalis acetosella</i>	16
<i>Acer pseudoplatanus</i>	37	<i>Silene dioica</i>	16
<i>Alnus glutinosa</i>	36	<i>Filipendula ulmaria</i>	15
<i>Corylus avellana</i>	36	<i>Ajuga reptans</i>	15
<i>Rubus caesius</i>	33	<i>Poa nemoralis</i>	15
<i>Geranium robertianum</i>	28	<i>Ligustrum vulgare</i>	14
<i>Hedera helix</i>	28	<i>Carpinus betulus</i>	14
<i>Aegopodium podagraria</i>	26	<i>Galeopsis tetrahit</i>	13
<i>Brachypodium sylvaticum</i>	26	<i>Dactylis glomerata</i> agg.	13
<i>Euonymus europaeus</i>	26	<i>Carex sylvatica</i>	13
<i>Circaea lutetiana</i>	25	<i>Lysimachia vulgaris</i>	12

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Cornus sanguinea	24	Lysimachia nummularia	12
Prunus padus	24	Mnium hornum	12
Ranunculus ficaria	24	Plagiomnium undulatum	12
Acer campestre	23	Viola reichenbachiana	12
Stachys sylvatica	23	Frangula alnus	12
Deschampsia cespitosa	23	Lamiastrum galeobdolon agg.	12
Poa trivialis	22	Scrophularia nodosa	12
Sorbus aucuparia	22	Rumex sanguineus	12
Dryopteris carthusiana agg.	22	Heracleum sphondylium	11
Alliaria petiolata	20	Rubus idaeus	11
Rubus fruticosus agg.	20	Dryopteris filix-mas	11
Fagus sylvatica	20	Anthriscus sylvestris	11
Moehringia trinervia	20	Mercurialis perennis	10
Eurhynchium praelongum	19	Prunus spinosa	10
Athyrium filix-femina	19	Iris pseudacorus	10
Anemone nemorosa	18	Impatiens noli-tangere	10
Viburnum opulus	18	Ribes rubrum	10
Ranunculus repens	18	Stellaria holostea	10
Humulus lupulus	17		



### **G1.3 - Mediterranean riparian woodland**

**European Forest Type:** 12.3 Mediterranean and Macaronesian riparian forest

**Origin of data (countries):** ES, FR, GR, IT

**List of alliances:** POP-01A, POP-01B, POP-01C, POP-01D, POP-01E, POP-03A

**Additional selection rules:** n/a

**Implications for EUNIS classification:** proposed new name: Mediterranean and Macaronesian riparian woodland

**Implications for EFT classification:** n/a

#### **Floristic composition:**

Rubus ulmifolius	58	Galium aparine	14
Brachypodium sylvaticum	45	Athyrium filix-femina	14
Fraxinus angustifolia	41	Oenanthe crocata	14
Crataegus monogyna agg.	35	Rubus caesius	14
Alnus glutinosa	31	Cornus sanguinea	13
Ulmus minor	31	Teucrium scorodonia	12
Salix atrocinerea	24	Poa nemoralis	12
Populus nigra	23	Dactylis glomerata agg.	12
Tamus communis	22	Sambucus nigra	11
Clematis vitalba	22	Smilax aspera	11
Hedera helix	20	Prunella vulgaris	11
Populus alba	19	Ruscus aculeatus	11
Pteridium aquilinum	19	Asparagus acutifolius	11
Bryonia cretica subsp. Dioica	18	Carex elata	11
Arum italicum	16	Geum urbanum	11
Urtica dioica	16	Rubia peregrina	11
Platanus orientalis	15	Rosa canina agg.	10
Carex pendula	15	Corylus avellana	10
Hedera maroccana	14	Scirpoides holoschoenus	10

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Lonicera periclymenum

14

Frangula alnus

10

**G1.4 - Broadleaved swamp woodland not on acid peat**

**European Forest Type:** 11.2 Alder swamp forest, 11.4 Pedunculate oak swamp forest, 11.5 Aspen swamp forest

**Origin of data (countries):** AT, CZ, DE, ES, FR, GB, HR, HU, NL, PL, SK

**List of alliances:** ALN-01A, MOB-02A, MOB-02B

**Additional selection rules:** n/a

**Implications for EUNIS classification:** proposed new name: Broadleaved swamp woodland on non-acid peat

**Implications for EFT classification:** n/a

**Floristic composition:**

Alnus glutinosa	81	Prunus padus	19
Dryopteris carthusiana agg.	55	Humulus lupulus	18
Lysimachia vulgaris	47	Ranunculus repens	18
Solanum dulcamara	43	Carex elata	18
Lycopus europaeus	37	Mnium hornum	18
Frangula alnus	34	Poa trivialis	18
Urtica dioica	33	Fraxinus excelsior	17
Galium palustre	31	Angelica sylvestris	16
Iris pseudacorus	31	Eupatorium cannabinum	16
Carex elongata	27	Viburnum opulus	16
Athyrium filix-femina	25	Calliergonella cuspidata	16
Calamagrostis canescens	25	Scutellaria galericulata	16
Salix cinerea	25	Rubus idaeus	15
Lythrum salicaria	25	Carex remota	14
Deschampsia cespitosa	24	Mentha aquatica	13
Peucedanum palustre	24	Equisetum fluviatile	13
Sorbus aucuparia	24	Lonicera periclymenum	13
Filipendula ulmaria	23	Carex paniculata	12
Juncus effusus	23	Myosotis scorpioides agg.	12

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Cirsium palustre	22	Sambucus nigra	12
Betula pubescens	22	Brachytecium rutabulum	12
Caltha palustris	21	Holcus lanatus	11
Rubus fruticosus agg.	21	Scirpus sylvaticus	11
Phragmites australis	21	Cardamine amara	11
Quercus robur	20	Cirsium oleraceum	11
Thelypteris palustris	20	Galium aparine	11
Carex acutiformis	20	Eurhynchium praelongum	10

## **G1.5 - Broadleaved swamp woodland on acid peat**

**European Forest Type:** 11.3 Birch swamp forest

**Origin of data (countries):** AT, DE, GB, NL, SK

**List of alliances:** MOB-01A, MOB-01B

**Additional selection rules:** n/a

**Implications for EUNIS classification:** proposed new name: Broadleaved swamp woodland on acid peat

**Implications for EFT classification:** n/a

### **Floristic composition:**

Betula pubescens	91	Polytrichum commune	18
Dryopteris carthusiana agg.	57	Holcus lanatus	17
Molinia caerulea	53	Agrostis canina	16
Sorbus aucuparia	44	Betula pendula	15
Frangula alnus	41	Sphagnum fimbriatum	15
Quercus robur	40	Vaccinium myrtillus	14
Alnus glutinosa	37	Deschampsia flexuosa	13
Rubus fruticosus agg.	36	Eurhynchium praelongum	13
Juncus effusus	30	Galium palustre	12
Mnium hornum	26	Sphagnum squarrosum	12
Salix cinerea	25	Aulacomnium palustre	11
Calamagrostis canescens	23	Carex curta	11
Sphagnum palustre	23	Carex nigra	10
Lysimachia vulgaris	22	Eriophorum vaginatum	10
Phragmites australis	22	Salix aurita	10
Lonicera periclymenum	20	Solanum dulcamara	10
Pinus sylvestris	18		

## G1.6 - [Fagus] woodland

**European Forest Type:** 6.1 Lowland beech forest of southern Scandinavia and north central Europe, 6.2 Atlantic and subatlantic lowland beech forest, 6.3 Subatlantic to Atlanto-Mediterranean submountainous beech forest, 6.4 Central European submountainous beech forest, 6.5 Carpathian submountainous beech forest, 6.6 Illyrian submountainous beech forest, 6.7 Moesian submountainous beech forest, 7.1 South-western European mountainous beech forest, 7.2 Central European mountainous beech forest, 7.3 Apennine-Corsican mountainous beech forest, 7.4 Illyrian mountainous beech forest, 7.5 Carpathian mountainous beech forest, 7.6 Moesian mountainous beech forest, 7.7 Crimean beech forest, 7.8 Oriental beech and hornbeam-oriental beech forest

**Origin of data (countries):** AT, BE, BG, CH, CZ, DU, ES, FR, GB, GR, HR, HU, IE, IT, NL, PL, RO, RU, SE, SI, SK, XK

**List of alliances:** FAG-01A, FAG-01B, FAG-01C, FAG-01D, FAG-01E, FAG-01F, FAG-01G, FAG-01H, FAG-01I, FAG-01J, FAG-01K, FAG-04A, ROB-02A, ROB-02B, ROB-02C

**Additional selection rules:** Instead of the relevés belonging to the listed alliances, all relevés with a cover of *Fagus sylvatica*, *F. moesiaca* or *F. orientalis* > 50% were assigned to this EUNIS type

**Implications for EUNIS classification:** G1.6' Fagus woodland on non-acid soils, G1.6'' Fagus woodland on acid soils

**Implications for EFT classification:** Split cross-cuts EFT typology (G1.6')

### Floristic composition:

<i>Fagus sylvatica</i>	95	<i>Euphorbia amygdaloides</i>	15
<i>Galium odoratum</i>	40	<i>Fragaria vesca</i>	15
<i>Oxalis acetosella</i>	37	<i>Pteridium aquilinum</i>	15
<i>Acer pseudoplatanus</i>	36	<i>Senecio nemorensis</i>	15
<i>Mycelis muralis</i>	30	<i>Solidago virgaurea</i>	15
<i>Athyrium filix-femina</i>	27	<i>Carpinus betulus</i>	14
<i>Hedera helix</i>	25	<i>Geranium robertianum</i>	14
<i>Lamium galeobdolon</i> agg.	25	<i>Polygonatum multiflorum</i>	14
<i>Poa nemoralis</i>	25	<i>Sanicula europaea</i>	14
<i>Mercurialis perennis</i>	24	<i>Carex digitata</i>	13
<i>Prenanthes purpurea</i>	24	<i>Daphne mezereum</i>	13
<i>Anemone nemorosa</i>	23	<i>Ilex aquifolium</i>	13

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Fraxinus excelsior	23	Brachypodium sylvaticum	12
Luzula luzuloides	23	Lathyrus vernus	12
Viola reichenbachiana	23	Maianthemum bifolium	12
Picea abies	22	Neottia nidus-avis	12
Sorbus aucuparia	22	Quercus petraea agg.	12
Hieracium murorum agg.	21	Acer campestre	11
Abies alba	20	Carex sylvatica	11
Deschampsia flexuosa	20	Epilobium montanum	11
Polytrichum formosum	20	Acer platanoides	10
Dryopteris filix-mas	19	Ajuga reptans	10
Vaccinium myrtillus	18	Hypnum cupressiforme	10
Melica uniflora	17	Lonicera xylosteum	10
Rubus idaeus	17	Paris quadrifolia	10
Milium effusum	16	Prunus avium	10
Cardamine bulbifera	15	Sorbus aria agg.	10
Corylus avellana	15		

## G1.7 - Thermophilous deciduous woodland

**European Forest Type:** 8.1 Downy oak forest, 8.2 Turkey oak, Hungarian oak and Sessile oak forest, 8.3 Pyrenean oak forest, 8.4 Portugese oak and Mirbeck's oak Iberian forest, 8.5 Macedonian oak forest, 8.6 Valonia oak forest, 8.7 Chestnut forest, 8.8 Other thermophilous deciduous forests

**Origin of data (countries):** AT, BA, BG, CH, CZ, DU, ES, FR, GB, GR, HR, HU, IE, IT, MK, NL, PL, RO, SI, SK, SM, UA

**List of alliances:** PUB-01C, PUB-02A, PUB-02B, PUB-02C, PUB-02D, PUB-02E, PUB-02F, PUB-02G, PUB-02H, PUB-02I, PUB-02J, PUB-02K, PUB-02L, PUB-02M, PUB-02P, PUB-03B

**Additional selection rules:** In addition to the relevés belonging to the listed alliances, all relevés with a cover of *Quercus pubescens*, *Q. cerris*, *Q. trojana*, *Q. faginea* or *Q. frainetto* > 25% were assigned to this EUNIS type

**Implications for EUNIS classification:** n/a

**Implications for EFT classification:** n/a

### Floristic composition:

<i>Crataegus monogyna</i> agg.	62	<i>Cruciata glabra</i>	16
<i>Fraxinus ornus</i>	38	<i>Rosa arvensis</i>	16
<i>Brachypodium sylvaticum</i>	37	<i>Viola reichenbachiana</i>	16
<i>Acer campestre</i>	36	<i>Juniperus communis</i>	16
<i>Dactylis glomerata</i> agg.	35	<i>Campanula persicifolia</i>	16
<i>Quercus cerris</i>	34	<i>Rosa canina</i> agg.	15
<i>Ligustrum vulgare</i>	33	<i>Euphorbia cyparissias</i>	15
<i>Quercus pubescens</i>	32	<i>Lathyrus niger</i>	15
<i>Hedera helix</i>	31	<i>Polygonatum odoratum</i>	15
<i>Fragaria vesca</i>	30	<i>Carex flacca</i>	15
<i>Cornus mas</i>	28	<i>Rubus ulmifolius</i>	15
<i>Sorbus torminalis</i>	28	<i>Euphorbia amygdaloides</i>	14
<i>Prunus spinosa</i>	27	<i>Hieracium murorum</i> agg.	14
<i>Poa nemoralis</i>	24	<i>Viola hirta</i>	14
<i>Cornus sanguinea</i>	24	<i>Quercus frainetto</i>	14
<i>Clinopodium vulgare</i>	24	<i>Brachypodium pinnatum</i> subsp. <i>pinnatum</i>	13



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Tamus communis	24	Daphne laureola	13
Melica uniflora	23	Sorbus domestica	13
Viola alba	23	Quercus robur	13
Teucrium chamaedrys	23	Lonicera xylosteum	12
Quercus petraea agg.	22	Ajuga reptans	12
Carpinus betulus	22	Hepatica nobilis	12
Festuca heterophylla	22	Potentilla micrantha	12
Vincetoxicum hirundinaria	22	Prunus avium	12
Corylus avellana	22	Asparagus acutifolius	12
Veronica chamaedrys agg.	21	Lathyrus venetus	12
Stachys officinalis	20	Primula vulgaris	12
Ruscus aculeatus	20	Fagus sylvatica	12
Geum urbanum	19	Galium mollugo agg.	12
Ostrya carpinifolia	19	Rhamnus catharticus	12
Viburnum lantana	19	Sorbus aria agg.	12
Buglossoides purpureoaeerulea	18	Lonicera etrusca	11
Luzula forsteri	18	Hypericum perforatum	11
Clematis vitalba	18	Brachypodium pinnatum subsp. rupestre	11
Pteridium aquilinum	17	Galium aparine	11
Euonymus europaeus	17	Campanula trachelium	11
Rubia peregrina	17	Genista tinctoria	11
Melittis melissophyllum	17	Mycelis muralis	10
Tanacetum corymbosum	17	Fraxinus excelsior	10

**G1.8 - Acidophilous [Quercus]-dominated woodland****European Forest Type:** 4.1 Acidophilous oakwood, 4.2 Oak-birch forest**Origin of data (countries):** AT, CZ, DE, ES, FR, GB, HR, HU, IT, NL, PL, RO, RU, SI, SK**List of alliances:** PUB-02B, PUB-02C, PUB-02D, ROB-01A, ROB-01B, ROB-01C, ROB-01D, ROB-01E, ROB-01F, ROB-01G, ROB-01H**Additional selection rules:** n/a**Implications for EUNIS classification:** proposed new name: Acidophilous Quercus woodland**Implications for EFT classification:** n/a**Floristic composition:**

Quercus robur	54	Ilex aquifolium	15
Sorbus aucuparia	51	Anthoxanthum odoratum agg.	15
Deschampsia flexuosa	45	Ceratocarpus claviculata	14
Frangula alnus	36	Hedera helix	14
Dryopteris carthusiana agg.	34	Mnium hornum	14
Rubus fruticosus agg.	32	Crataegus monogyna agg.	14
Betula pendula	32	Poa nemoralis	14
Fagus sylvatica	32	Polygonatum multiflorum	13
Pteridium aquilinum	31	Teucrium scorodonia	13
Lonicera periclymenum	29	Calluna vulgaris	12
Vaccinium myrtillus	26	Maianthemum bifolium	12
Holcus mollis	26	Sambucus nigra	12
Molinia caerulea	25	Stellaria holostea	12
Betula pubescens	24	Quercus rubra	11
Prunus serotina	22	Dicranum scoparium	11
Agrostis capillaris	22	Hypnum cupressiforme	11
Quercus petraea agg.	21	Luzula luzuloides	11
Pinus sylvestris	19	Oxalis acetosella	11
Corylus avellana	19	Hieracium murorum agg.	10

*Linking in situ vegetation data to the EUNIS habitat classification: results for forest habitats*

Polytrichum formosum	16	Carpinus betulus	10
Melampyrum pratense	16		

## **G1.9 - Non-riverine woodland with [Betula], [Populus tremula] or [Sorbus aucuparia]**

**European Forest Type:** 3.4 Mountainous birch forest, 13.3 Birch forest, 13.4 Aspen forest

**Origin of data (countries):** ES, FR, IT, RU

**List of alliances:** BRA-01B, BRA-01C, FAG-05A, FAG-05B, FAG-05C, FAG-05D, PIC-01G, PIC-01H

**Additional selection rules:** n/a

**Implications for EUNIS classification:** G1.9' Mountain betula & Populus tremula woodland on mineral soils, G1.9'' Lowland Continental Betula and Populus tremula woodland on mineral soils

**Implications for EFT classification:** 3.4 Mountainous birch forest (G1.9'), 13.3 Birch forest (G1.9''), 13.4 Aspen forest (G1.9'')

### **Floristic composition:**

Betula pendula	59	Primula macrocalyx	17
Sorbus aucuparia	56	Urtica dioica	17
Stellaria holostea	51	Oxalis acetosella	17
Fragaria vesca	44	Epilobium angustifolium	16
Vaccinium myrtillus	34	Saxifraga spathularis	16
Pinus sylvestris	33	Heracleum sibiricum	16
Pteridium aquilinum	33	Lathyrus pisiformis	16
Calamagrostis arundinacea	32	Anemone nemorosa	16
Solidago virgaurea	32	Bupleurum longifolium	15
Poa nemoralis	31	Campanula persicifolia	15
Vicia sepium	31	Cirsium helenioides	15
Brachypodium pinnatum subsp. pinnatum	30	Deschampsia flexuosa	15
Galium boreale	30	Euphorbia subcordata	15
Vulpicidia pinastri	30	Orthilia secunda	15
Melica nutans	29	Pleurospermum uralense	15
Hypogymnia physodes	29	Acer pseudoplatanus	15
Lathyrus vernus	29	Melampyrum pratense	14

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Corylus avellana	28	Melica uniflora	14
Evernia mesomorpha	28	Tamus communis	14
Parmelia sulcata	28	Crepis sibirica	14
Rubus saxatilis	28	Ligustrum vulgare	14
Viola collina	28	Rosa majalis	14
Lilium martagon	28	Sanionia uncinata	14
Pleurozium schreberi	27	Trollius europaeus	14
Sanguisorba officinalis	27	Blechnum spicant	14
Viola mirabilis	27	Rubus idaeus	13
Crataegus monogyna agg.	26	Salix caprea	13
Geranium sylvaticum	26	Silene nutans	13
Parmeliopsis ambigua	26	Hylocomium splendens	13
Erica arborea	26	Larix sibirica	13
Viola canina	25	Rhodobryum roseum	13
Campanula glomerata	24	Rhytidiadelphus triquetrus	13
Adenophora lilifolia	23	Bistorta officinalis	13
Carex digitata	23	Pyrola minor	12
Hypogymnia tubulosa	23	Mercurialis perennis	12
Lupinaster pentaphyllus	23	Rubus ulmifolius	12
Luzula pilosa	23	Maianthemum bifolium	12
Pseudevernia furfuracea	23	Omphalodes nitida	12
Angelica sylvestris	22	Polystichum setiferum	12
Milium effusum	21	Potentilla erecta	12
Prunus avium	21	Thalictrum minus	12
Pulmonaria mollis	21	Fraxinus excelsior	12
Polygonatum odoratum	20	Primula vulgaris	12
Dactylis glomerata agg.	20	Frangula alnus	11
Veronica chamaedrys agg.	20	Quercus robur	11
Melanelia olivacea	20	Aconogonon alpinum	11
Seseli krylovii	20	Cirsium palustre	11
Trientalis europaea	20	Dicranum scoparium	11
Dryopteris filix-mas	20	Geranium robertianum	11
Hieracium umbellatum	20	Euphorbia dulcis	11

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Ilex aquifolium	20	Salix atrocinerea	10
Stachys officinalis	20	Hedera helix	10
Lonicera periclymenum	19	Origanum vulgare	10
Populus tremula	19	Sanicula europaea	10
Aegopodium podagraria	19	Cerastium pauciflorum	10
Teucrium scorodonia	18	Clematis alpina	10
Dryopteris carthusiana agg.	18	Geranium pseudosibiricum	10
Aconitum septentrionale	18	Hypericum maculatum	10
Chamaecytisus ruthenicus	18	Lathyrus pratensis	10
Crepis lampanoides	18	Poa sibirica	10
Luzula sylvatica	17	Ptilium crista-castrensis	10
Achillea millefolium agg.	17	Ranunculus auricomus	10
Betula pubescens	17	Vicia sylvatica	10
Digitalis grandiflora	17		

*Linking in situ vegetation data to the EUNIS habitat classification: results for forest habitats***G1.A - Meso- and eutrophic [Quercus], [Carpinus], [Fraxinus], [Acer], [Tilia], [Ulmus] and related woodland**

**European Forest Type:** 5.1 Pedunculate oak-hornbeam forest, 5.2 Sessile oak-hornbeam forest, 5.3 Ashwood and oak-ash forest, 5.4 Maple-oak forest, 5.5 Lime-oak forest, 5.6 Maple-lime forest, 5.7 Lime forest, 5.8 Ravine and slope forest, 5.9 Other mesohpytic deciduous forests

**Origin of data (countries):** AT, BE, CH, CZ, DE, DU, ES, FR, GB, GR, HR, HU, IE, IT, NL, PL, RO, RU, SE, SI, SK, SM, UA

**List of alliances:** FAG-02A, FAG-02B, FAG-02C, FAG-02D, FAG-02E, FAG-02F, FAG-02G, FAG-02H, FAG-02I, FAG-02J, FAG-02K, FAG-02L, FAG-02M, FAG-03A, FAG-03C, FAG-03D, FAG-03E, FAG-03F, FAG-03G

**Additional selection rules:** In addition to the relevés belonging to the listed alliances, all relevés with a cover of *Acer pseudoplatanus*, *Tilia platyphyllos* or *Ulmus glabra* > 50% were assigned to this EUNIS type

**Implications for EUNIS classification:** proposed new name: Mesotrophic and eutrophic deciduous woodland, not dominated by *Fagus*

**Implications for EFT classification:** n/a

**Floristic composition:**

<i>Acer pseudoplatanus</i>	47	<i>Melica uniflora</i>	18
<i>Carpinus betulus</i>	45	<i>Ajuga reptans</i>	17
<i>Fraxinus excelsior</i>	44	<i>Campanula trachelium</i>	17
<i>Corylus avellana</i>	44	<i>Carex sylvatica</i>	16
<i>Fagus sylvatica</i>	39	<i>Lonicera xylosteum</i>	16
<i>Crataegus monogyna</i> agg.	39	<i>Galium aparine</i>	15
<i>Lamium galeobdolon</i> agg.	36	<i>Ligustrum vulgare</i>	15
<i>Galium odoratum</i>	35	<i>Euonymus europaeus</i>	14
<i>Poa nemoralis</i>	31	<i>Sanicula europaea</i>	14
<i>Mercurialis perennis</i>	31	<i>Veronica chamaedrys</i> agg.	14
<i>Acer campestre</i>	31	<i>Circaea lutetiana</i>	14
<i>Hedera helix</i>	30	<i>Hepatica nobilis</i>	14
<i>Geranium robertianum</i>	29	<i>Rubus fruticosus</i> agg.	14
<i>Quercus robur</i>	29	<i>Senecio nemorensis</i>	14

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Urtica dioica	27	Paris quadrifolia	13
Geum urbanum	27	Hieracium murorum agg.	13
Quercus petraea agg.	27	Impatiens noli-tangere	13
Dryopteris filix-mas	27	Picea abies	13
Polygonatum multiflorum	27	Tilia platyphyllos	13
Viola reichenbachiana	27	Euphorbia amygdaloides	13
Brachypodium sylvaticum	26	Dryopteris carthusiana agg.	13
Oxalis acetosella	26	Convallaria majalis	13
Stellaria holostea	25	Carex digitata	12
Pulmonaria officinalis agg.	24	Actaea spicata	12
Anemone nemorosa	23	Carex pilosa	12
Tilia cordata	23	Galium sylvaticum	12
Lathyrus vernus	22	Moehringia trinervia	12
Sambucus nigra	22	Rubus idaeus	12
Asarum europaeum	22	Glechoma hederacea agg.	12
Prunus avium	22	Stachys sylvatica	11
Mycelis muralis	22	Alliaria petiolata	11
Aegopodium podagraria	21	Cardamine bulbifera	11
Fragaria vesca	21	Scrophularia nodosa	11
Acer platanoides	20	Symphytum tuberosum	10
Ulmus glabra	20	Betula pendula	10
Athyrium filix-femina	20	Daphne mezereum	10
Dactylis glomerata agg.	19	Pteridium aquilinum	10
Sorbus aucuparia	19	Luzula luzuloides	10
Melica nutans	18	Maianthemum bifolium	10
Cornus sanguinea	18	Ranunculus ficaria	10
Milium effusum	18		



*Linking in situ vegetation data to the EUNIS habitat classification: results for forest habitats*

## **G1.B - Non-riverine [Alnus] woodland**

**European Forest Type:** 13.1 Alder forest, 13.2 Italian alder forest

**Origin of data (countries):** AT, CZ, DE, ES, FR, GB, GR, HR, HU, IT, NL, PL, RO, RU, SI, SK

**List of alliances:** ALN-01A, POP-02A

**Additional selection rules:** n/a

**Implications for EUNIS classification:** proposed new name: Non-riverine Alnus woodland on mineral soil

**Implications for EFT classification:** n/a

### **Floristic composition:**

Urtica dioica	54	Festuca gigantea	16
Alnus glutinosa	53	Anemone nemorosa	16
Fraxinus excelsior	45	Alnus incana	16
Crataegus monogyna agg.	33	Carex remota	16
Quercus robur	32	Hedera helix	15
Sambucus nigra	32	Caltha palustris	15
Dryopteris carthusiana agg.	32	Brachythecium rutabulum	15
Geum urbanum	30	Galium palustre	15
Glechoma hederacea agg.	30	Iris pseudacorus	15
Deschampsia cespitosa	29	Ajuga reptans	15
Galium aparine	28	Plagiomnium undulatum	14
Acer pseudoplatanus	27	Acer campestre	14
Aegopodium podagraria	27	Moehringia trinervia	13
Rubus caesius	26	Cirsium oleraceum	13
Prunus padus	25	Lamium galeobdolon agg.	12
Athyrium filix-femina	25	Alliaria petiolata	12
Corylus avellana	25	Lonicera periclymenum	12
Stachys sylvatica	23	Eurhynchium praelongum	12
Poa trivialis	22	Mnium hornum	12

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Lysimachia vulgaris	22	Fagus sylvatica	12
Ranunculus repens	22	Juncus effusus	12
Geranium robertianum	22	Silene dioica	12
Sorbus aucuparia	22	Phalaris arundinacea	11
Brachypodium sylvaticum	21	Carex sylvatica	11
Filipendula ulmaria	21	Carex acutiformis	11
Circaea lutetiana	20	Lysimachia nummularia	11
Solanum dulcamara	20	Eupatorium cannabinum	11
Euonymus europaeus	19	Chaerophyllum hirsutum	11
Humulus lupulus	19	Myosotis scorpioides agg.	11
Impatiens noli-tangere	19	Paris quadrifolia	10
Cornus sanguinea	19	Lamium maculatum	10
Oxalis acetosella	19	Poa nemoralis	10
Ranunculus ficaria	18	Betula pubescens	10
Angelica sylvestris	18	Calamagrostis canescens	10
Rubus fruticosus agg.	18	Cirsium palustre	10
Rubus idaeus	18	Impatiens parviflora	10
Frangula alnus	17	Picea abies	10
Viburnum opulus	17	Polygonatum multiflorum	10
Lycopus europaeus	17		

*Linking in situ vegetation data to the EUNIS habitat classification: results for forest habitats***G1.C - Highly artificial broadleaved deciduous forestry plantations****European Forest Type:** n/a**Origin of data (countries):** AT, BE, CH, CZ, DU, FR, GB, IT, NL, RU, SK**List of alliances:** RHA-01B, RHA-01C, RHA-01D

**Additional selection rules:** In addition to the relevés belonging to the listed alliances, relevés with a cover of *Quercus rubra*, *Q. palustris*, *Populus balsamifera*, *P. x canadensis*, *P. candicans*, *P. deltoides*, *Fraxinus pennsylvanica* or *Acer saccharinum* > 25% and higher than any other tree species were assigned to EUNIS type

**Implications for EUNIS classification:** proposed new name: Broadleaved deciduous plantations of non site-native trees

**Implications for EFT classification:** n/a**Floristic composition:**

<i>Urtica dioica</i>	58	<i>Elymus repens</i>	15
<i>Populus x canadensis</i>	56	<i>Holcus lanatus</i>	15
<i>Galium aparine</i>	48	<i>Arrhenatherum elatius</i>	14
<i>Sambucus nigra</i>	43	<i>Prunus padus</i>	14
<i>Rubus fruticosus</i> agg.	37	<i>Taraxacum</i> sect. <i>Ruderalia</i>	14
<i>Crataegus monogyna</i> agg.	29	<i>Chelidonium majus</i>	13
<i>Poa trivialis</i>	29	<i>Geranium robertianum</i>	13
<i>Quercus robur</i>	28	<i>Moehringia trinervia</i>	13
<i>Glechoma hederacea</i> agg.	26	<i>Stellaria media</i> agg.	13
<i>Alnus glutinosa</i>	24	<i>Alliaria petiolata</i>	12
<i>Robinia pseudacacia</i>	24	<i>Heracleum sphondylium</i>	12
<i>Sorbus aucuparia</i>	24	<i>Holcus mollis</i>	12
<i>Rubus caesius</i>	23	<i>Phalaris arundinacea</i>	12
<i>Galeopsis tetrahit</i>	22	<i>Acer pseudoplatanus</i>	11
<i>Geum urbanum</i>	21	<i>Agrostis capillaris</i>	11
<i>Anthriscus sylvestris</i>	20	<i>Euonymus europaeus</i>	11
<i>Fraxinus excelsior</i>	20	<i>Frangula alnus</i>	11

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Dactylis glomerata agg.	19	Hedera helix	11
Quercus rubra	19	Impatiens parviflora	11
Humulus lupulus	17	Ranunculus repens	11
Lonicera periclymenum	16	Rosa canina agg.	11
Poa nemoralis	16	Aegopodium podagraria	10
Brachytecium rutabulum	15	Cornus sanguinea	10
Corylus avellana	15	Prunus serotina	10
Dryopteris carthusiana agg.	15		

## **G1.D - Fruit and nut tree orchards**

**European Forest Type:** n/a

**Origin of data (countries):** n/a

**List of alliances:** n/a

**Additional selection rules:** n/a

**Implications for EUNIS classification:** G1.D is not a woodland and should be removed, could go into EUNIS group I

**Implications for EFT classification:** n/a

**Floristic composition:**

No data

## G2.1 - Mediterranean evergreen [*Quercus*] woodland

**European Forest Type:** 9.1 Mediterranean evergreen oak forest

**Origin of data (countries):** ES, FR, GB, GR, HR, IT, MO, SI

**List of alliances:** QUI-02A, QUI-02D, QUI-03A, QUI-03B, QUI-03C, QUI-03D, QUI-03E, QUI-03F, QUI-03G

**Additional selection rules:** In addition to the relevés belonging to the listed listed below, all relevés with a cover of *Quercus ilex*, *Q. rotundifolia*, *Q. coccifera*, *Q. suber* or *Q. crenata* > 25% were assigned to this EUNIS type

**Implications for EUNIS classification:** proposed new name: Mediterranean evergreen *Quercus* woodland

**Implications for EFT classification:** n/a

### Floristic composition:

<i>Rubia peregrina</i>	66	<i>Phillyrea angustifolia</i>	18
<i>Quercus ilex</i> subsp. <i>Ilex</i>	60	<i>Quercus suber</i>	17
<i>Asparagus acutifolius</i>	44	<i>Juniperus oxycedrus</i>	16
<i>Ruscus aculeatus</i>	40	<i>Asplenium onopteris</i>	16
<i>Smilax aspera</i>	40	<i>Pistacia terebinthus</i>	16
<i>Arbutus unedo</i>	32	<i>Dactylis glomerata</i> agg.	16
<i>Hedera helix</i>	31	<i>Rosa sempervirens</i>	15
<i>Erica arborea</i>	28	<i>Lonicera etrusca</i>	14
<i>Phillyrea latifolia</i>	28	<i>Thymus vulgaris</i>	14
<i>Rubus ulmifolius</i>	28	<i>Osyris alba</i>	14
<i>Quercus coccifera</i>	27	<i>Viburnum tinus</i>	14
<i>Pistacia lentiscus</i>	26	<i>Pinus halepensis</i>	13
<i>Teucrium chamaedrys</i>	26	<i>Euphorbia characias</i>	13
<i>Lonicera implexa</i>	26	<i>Brachypodium retusum</i>	13
<i>Crataegus monogyna</i> agg.	26	<i>Carex distachya</i>	12
<i>Tamus communis</i>	22	<i>Buxus sempervirens</i>	11
<i>Quercus ilex</i> subsp. <i>rotundifolia</i>	21	<i>Cistus albidus</i>	11

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Clematis flammula	20	Cistus salvifolius	11
Rhamnus alaternus	20	Rosmarinus officinalis	11
Brachypodium sylvaticum	19	Prunus spinosa	10
Fraxinus ornus	18	Luzula forsteri	10
Carex hallerana	18	Daphne gnidium	10

## G2.2 - Eurasian continental sclerophyllous woodland

**European Forest Type:** 9.5 Other sclerophyllous forest

**Origin of data (countries):** ES

**List of alliances:** QUI-03I

**Additional selection rules:** n/a

**Implications for EUNIS classification:** proposed new name: Mainland lauriphyllous woodland

**Implications for EFT classification:** n/a

### Floristic composition:

Smilax aspera	62	Crataegus monogyna agg.	20
Arbutus unedo	53	Brachypodium pinnatum subsp. rupestre	17
Laurus nobilis	46	Phillyrea latifolia	17
Pteridium aquilinum	45	Rosa sempervirens	17
Rubia peregrina	42	Quercus robur	16
Rubus ulmifolius	42	Polypodium cambricum	15
Ruscus aculeatus	42	Prunus lusitanica subsp. lusitanica	15
Lonicera periclymenum	39	Parietaria judaica	14
Asplenium onopteris	38	Quercus faginea	13
Tamus communis	34	Arum italicum	13
Erica arborea	33	Daboecia cantabrica	13
Hedera maroccana	32	Polystichum setiferum	12
Hedera helix	29	Cistus salvifolius	11
Teucrium scorodonia	27	Genista hispanica	11
Rhamnus alaternus	24	Iris foetidissima	11
Viburnum tinus	23	Quercus ilex subsp. rotundifolia	11



## G2.3 - Macaronesian [Laurus] woodland

**European Forest Type:** 9.4 Macaronesian laurisilva

**Origin of data (countries):** ES

**List of alliances:** AZO-01A, AZO-02A, AZO-02B, LAU-02A, LAU-02B, LAU-02C

**Additional selection rules:** n/a

**Implications for EUNIS classification:** proposed new name: Macaronesian lauriphyllous woodland

**Implications for EFT classification:** n/a

### Floristic composition:

Myrica faya	56	Rubus ulmifolius	20
Asplenium onopteris	43	Prunus lusitanica subsp. hixa	19
Dryopteris oligodonta	42	Pteris incompleta	19
Erica arborea	40	Cedronella canariensis	18
Persea indica	36	Heberdenia excelsa	18
Pteridium aquilinum	36	Polystichum setiferum	18
Viburnum tinus	36	Laurus azorica	17
Ilex canariensis	31	Davallia canariensis	16
Phyllis nobla	31	Rhamnus glandulosa	16
Galium scabrum	29	Blechnum spicant	16
Diplazium caudatum	28	Pericallis appendiculatus	15
Rubia peregrina	28	Rubus bollei	15
Woodwardia radicans	28	Picconia excelsa	14
Hypericum grandifolium	25	Ranunculus cortusifolius	14
Ocotea foetens	25	Semele androgyna	12
Brachypodium sylvaticum	23	Asplenium hemionitis	11
Sibthorpia peregrina	21	Erica scoparia	11
Eupatorium adenophorum	20	Urtica morifolia	11
Ilex perado	20	Cystopteris viridula	10
Ixanthus viscosus	20	Myosotis latifolia	10

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**G2.4 - [Olea europaea] - [Ceratonia siliqua] woodland****European Forest Type:** 9.2 Olive-carob forest**Origin of data (countries):** ES, FR, GR, IT**List of alliances:** QUI-01A, QUI-02B**Additional selection rules:** n/a**Implications for EUNIS classification:** proposed new name: *Olea oleaster-Ceratonia siliqua* woodland**Implications for EFT classification:** n/a**Floristic composition:**

<i>Pistacia lentiscus</i>	81	<i>Cistus salvifolius</i>	16
<i>Asparagus acutifolius</i>	43	<i>Pistacia terebinthus</i>	16
<i>Smilax aspera</i>	40	<i>Euphorbia dendroides</i>	14
<i>Olea europaea</i> agg.	39	<i>Juniperus oxycedrus</i>	14
<i>Brachypodium retusum</i>	37	<i>Rosmarinus officinalis</i>	14
<i>Pinus halepensis</i>	35	<i>Arbutus unedo</i>	14
<i>Rubia peregrina</i>	30	<i>Piptatherum miliaceum</i>	13
<i>Arisarum vulgare</i>	29	<i>Juniperus phoenicea</i>	13
<i>Quercus coccifera</i>	28	<i>Geranium purpureum</i>	12
<i>Dactylis glomerata</i> agg.	24	<i>Quercus ilex</i> subsp. <i>ilex</i>	12
<i>Urginea maritima</i>	23	<i>Thymus vulgaris</i>	12
<i>Myrtus communis</i>	22	<i>Piptatherum coerulescens</i>	12
<i>Rhamnus alaternus</i>	22	<i>Calicotome villosa</i>	11
<i>Lonicera implexa</i>	20	<i>Euphorbia spinosa</i>	11
<i>Phillyrea latifolia</i>	20	<i>Psoralea bituminosa</i>	11
<i>Prasium majus</i>	18	<i>Asphodelus ramosus</i>	11
<i>Cistus incanus</i> subsp. <i>creticus</i>	18	<i>Galium rubrum</i>	10
<i>Clematis flammula</i>	18	<i>Trifolium campestre</i>	10
<i>Ceratonia siliqua</i>	17		

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*Linking in situ vegetation data to the EUNIS habitat classification: results for forest habitats***G2.5 - [Phoenix] groves****European Forest Type:** 9.3 Palm groves**Origin of data (countries):** GR**List of alliances:** NER-01F, OLE-01C**Additional selection rules:** In addition the relevés of alliance OLE-01C, relevés with a cover of *Phoenix canariensis* > 5% were assigned to this EUNIS type**Implications for EUNIS classification:** proposed new name: Phoenix groves**Implications for EFT classification:** n/a**Floristic composition:**

Phoenix theophrasti	100	Anthyllis hermanniae	14
Arisarum vulgare	35	Arum concinatum	14
Leontodon tuberosus	35	Asparagus acutifolius	14
Nerium oleander	35	Asperula rigida	14
Pistacia lentiscus	35	Asphodeline lutea	14
Reichardia picroides	35	Asphodelus ramosus	14
Tordylium apulum	35	Brachypodium distachyon	14
Urginea maritima	35	Brassica cretica	14
Anagallis arvensis	28	Bromus fasciculatus	14
Anthemis chia	28	Bromus madritensis	14
Asparagus aphyllus	28	Carlina corymbosa	14
Ceratonia siliqua	28	Crucianella latifolia	14
Geranium purpureum	28	Cynodon dactylon	14
Oxalis pes-caprae	28	Daucus involucratus	14
Parietaria cretica	28	Desmazeria rigida	14
Petromarula pinnata	28	Erica manipuliflora	14
Satureja thymbra	28	Euphorbia dendroides	14
Silene sedoides	28	Galium aparine	14
Smilax aspera	28	Galium graecum	14

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Ballota pseudodictamnus	21	Genista acanthoclada	14
Brachypodium retusum	21	Lavatera bryoniifolia	14
Capparis spinosa	21	Medicago coronata	14
Centaurea redempta	21	Muscari comosum	14
Ficus carica	21	Orlaya kochii	14
Malcolmia flexuosa	21	Phagnalon graecum	14
Myrtus communis	21	Prasium majus	14
Phlomis lanata	21	Spartium junceum	14
Piptatherum coerulescens	21	Tamus communis	14
Piptatherum miliaceum	21	Teucrium microphyllum	14
Psoralea bituminosa	21	Thesium humile	14
Rostraria cristata	21	Thymelaea tartonraira subsp. argentea	14
Sarcopoterium spinosum	21	Torilis nodosa	14
Theligonum cynocrambe	21	Trifolium campestre	14
Urospermum picroides	21	Trifolium stellatum	14
Valantia muralis	21	Urtica pilulifera	14
Vitex agnus-castus	21	Valantia hispida	14
Aetheorhiza bulbosa	14	Viola scorpiuroides	14
Allium rubrovittatum	14		

*Linking in situ vegetation data to the EUNIS habitat classification: results for forest habitats***G2.6 - [Ilex aquifolium] woods****European Forest Type:** 9.5 Other sclerophyllous forest**Origin of data (countries):** AT, BE, CH, DU, ES, FR, GB, GR, IE, IT, NL**List of alliances:** FAG-01I, FAG-02A, FAG-02B, QUI-03D, ROB-01B, ROB-01C, ROB-02A**Additional selection rules:** n/a**Implications for EUNIS classification:** proposed new name: Ilex aquifolium woodland**Implications for EFT classification:** n/a**Floristic composition:**

Ilex aquifolium	100	Isothecium myosuroides	14
Hedera helix	64	Rubus fruticosus agg.	14
Pteridium aquilinum	49	Blechnum spicant	13
Fagus sylvatica	48	Leucobryum glaucum	13
Lonicera periclymenum	48	Rosa canina agg.	13
Quercus petraea agg.	30	Thuidium tamariscinum	13
Crataegus monogyna agg.	29	Acer campestre	12
Corylus avellana	28	Betula pubescens	12
Polytrichum formosum	28	Oxalis acetosella	12
Deschampsia flexuosa	27	Ruscus aculeatus	12
Fraxinus excelsior	24	Castanea sativa	11
Sorbus aucuparia	21	Hypnum cupressiforme	11
Vaccinium myrtillus	21	Acer pseudoplatanus	10
Dicranum scoparium	19	Frangula alnus	10
Carpinus betulus	17	Luzula sylvatica	10
Mnium hornum	16	Sambucus nigra	10
Prunus spinosa	16	Teucrium scorodonia	10
Dryopteris carthusiana agg.	15		

## **G2.7 - Canary Island heath woodland**

**European Forest Type:** 9.5 Other sclerophyllous forest

**Origin of data (countries):** ES

**List of alliances:** LAU-01A, LAU-01B, LAU-01C, LAU-01D, LAU-01E

**Additional selection rules:** n/a

**Implications for EUNIS classification:** proposed new name: Macaronesia heathy woodland

**Implications for EFT classification:** n/a

### **Floristic composition:**

Erica arborea	64	Teline canariensis	18
Myrica faya	50	Teline microphylla	18
Ilex canariensis	46	Davallia canariensis	15
Laurus azorica	41	Phyllis nobla	15
Asplenium onopteris	33	Cedronella canariensis	14
Pteridium aquilinum	32	Picconia excelsa	14
Brachypodium sylvaticum	30	Hypericum grandifolium	13
Dryopteris oligodonta	24	Micromeria benthamii	13
Rubus ulmifolius	23	Adenocarpus foliolosus	12
Galium scabrum	22	Myosotis latifolia	12
Viburnum tinus	20		



## **G2.8 - Highly artificial broadleaved evergreen forestry plantations**

**European Forest Type:** n/a

**Origin of data (countries):** n/a

**List of alliances:** n/a

**Additional selection rules:** n/a

**Implications for EUNIS classification:** proposed new name: Broadleaved evergreen plantations of non site-native trees

**Implications for EFT classification:** n/a

**Floristic composition:**

No data

## **G2.9 - Evergreen orchards and groves**

**European Forest Type:** n/a

**Origin of data (countries):** n/a

**List of alliances:** n/a

**Additional selection rules:** n/a

**Implications for EUNIS classification:** G2.9 is not a woodland and should be removed, could go into EUNIS group I

**Implications for EFT classification:** n/a

**Floristic composition:**

No data

### G3.1 - [Abies] and [Picea] woodland

**European Forest Type:** 2.3 Nemoral spruce forest, 3.2 Subalpine and mountainous spruce and mountainous mixed spruce-silver fir forest, 2.8 Nemoral Silver fir forest, 7.9 Mountainous Silver fir forest, 10.6 Mediterranean and Anatolian fir forest

**Origin of data (countries):** AT, BE, BG, CH, CZ, DU, ES, FR, GB, GR, HR, IE, IT, NL, PL, SI, SK, XK, YU

**List of alliances:** FAG-01E, FAG-01F, FAG-01G, FAG-01I, FAG-01J, FAG-01K, FAG-04A, PIC-01A, PIC-01B, PIC-01C, PIC-01E, PIC-04A, PUB-02N, PUB-02O, ROB-02A, ROB-02C

**Additional selection rules:** Instead of the relevés belonging to the listed alliances listed below, relevés with a cover of *Picea abies*, *P. omorika*, *Abies alba*, *A. pinsapo*, *A. nebrodensis*, *A. cephalonica*, *A. sibirica*, *A. nordmanniana* or *A. borisii-regis* > 25% and at the same time higher than any other tree species were assigned to this category; in addition, relevés with *Picea abies* from Norway, Sweden, Finland, Estonia and Russia were removed

**Implications for EUNIS classification:** G3.1' Temperate mountain *Picea* woodland, G3.1'' Temperate mountain *Abies* woodland, G3.1''' Mediterranean mountain *Abies* woodland

**Implications for EFT classification:** 2.3 Nemoral spruce forest (G3.1'), 3.2 Subalpine and mountainous spruce and mountainous mixed spruce-silver fir forest (G3.1'), 2.8 Nemoral Silver fir forest (G3.1''), 7.9 Mountainous Silver fir forest (G3.1'''), 10.6 Mediterranean and Anatolian fir forest (G3.1''')

#### Floristic composition:

<i>Picea abies</i>	84	<i>Paris quadrifolia</i>	15
<i>Oxalis acetosella</i>	67	<i>Phyteuma spicatum</i>	15
<i>Vaccinium myrtillus</i>	60	<i>Polygonatum verticillatum</i>	15
<i>Sorbus aucuparia</i>	55	<i>Viola reichenbachiana</i>	15
<i>Abies alba</i>	54	<i>Ajuga reptans</i>	14
<i>Fagus sylvatica</i>	49	<i>Corylus avellana</i>	14
<i>Dicranum scoparium</i>	40	<i>Epilobium montanum</i>	14
<i>Hieracium murorum</i> agg.	39	<i>Gymnocarpium dryopteris</i>	14
<i>Polytrichum formosum</i>	39	<i>Melampyrum sylvaticum</i>	14
<i>Athyrium filix-femina</i>	38	<i>Sanicula europaea</i>	14
<i>Deschampsia flexuosa</i>	37	<i>Galium rotundifolium</i>	13
<i>Dryopteris carthusiana</i> agg.	36	<i>Geranium robertianum</i>	13

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Prenanthes purpurea	36	Lonicera nigra	13
Acer pseudoplatanus	33	Melica nutans	13
Rubus idaeus	31	Rhytidadelphus loreus	13
Fragaria vesca	28	Veronica officinalis	13
Maianthemum bifolium	27	Calamagrostis varia	12
Hylocomium splendens	26	Fraxinus excelsior	12
Mycelis muralis	26	Gentiana asclepiadea	12
Senecio nemorensis	26	Lamium galeobdolon agg.	12
Solidago virgaurea	25	Larix decidua	12
Homogyne alpina	23	Rhytidadelphus triquetrus	12
Luzula sylvatica	22	Bazzania trilobata	11
Luzula luzuloides	21	Ctenidium molluscum	11
Mercurialis perennis	20	Adenostyles alpina subsp. alpina	10
Galium odoratum	19	Anemone nemorosa	10
Calamagrostis villosa	18	Blechnum spicant	10
Dryopteris filix-mas	18	Brachypodium sylvaticum	10
Pleurozium schreberi	18	Lycopodium annotinum	10
Luzula pilosa	17	Pinus sylvestris	10
Vaccinium vitis-idaea	16	Rosa pendulina	10
Carex digitata	15	Sambucus racemosa	10
Daphne mezereum	15	Valeriana tripteris	10
Hypnum cupressiforme	15		

**G3.2 - Alpine [Larix] - [Pinus cembra] woodland****European Forest Type:** 3.1 Subalpine larch-arolla pine and dwarf pine forest**Origin of data (countries):** AT, CH, CZ, DU, FR, GB, IE, IT, NL, PL, SI, SK**List of alliances:** ERI-01A, PIC-01A**Additional selection rules:** Instead of the relevés belonging to the listed alliances, relevés with a cover of *Larix decidua* or *Pinus cembra* > 15% and at the same time higher than any other tree species were assigned to this EUNIS type**Implications for EUNIS classification:** proposed new name: Temperate subalpine *Larix-Pinus* woodland**Implications for EFT classification:** n/a**Floristic composition:**

<i>Larix decidua</i>	93	<i>Pinus mugo</i>	14
<i>Vaccinium myrtillus</i>	56	<i>Rhytidiadelphus triquetrus</i>	14
<i>Sorbus aucuparia</i>	49	<i>Rubus saxatilis</i>	14
<i>Picea abies</i>	43	<i>Acer pseudoplatanus</i>	13
<i>Homogyne alpina</i>	41	<i>Adenostyles alpina</i> subsp. <i>alpina</i>	13
<i>Deschampsia flexuosa</i>	39	<i>Fagus sylvatica</i>	13
<i>Hieracium murorum</i> agg.	37	<i>Lonicera alpigena</i>	13
<i>Oxalis acetosella</i>	35	<i>Luzula nivea</i>	13
<i>Geranium sylvaticum</i>	34	<i>Phyteuma orbiculare</i>	13
<i>Vaccinium vitis-idaea</i>	34	<i>Prenanthes purpurea</i>	13
<i>Pinus cembra</i>	28	<i>Rumex alpestris</i>	13
<i>Juniperus communis</i>	27	<i>Adenostyles alliariae</i>	12
<i>Melampyrum sylvaticum</i>	25	<i>Asplenium viride</i>	12
<i>Solidago virgaurea</i>	24	<i>Erica herbacea</i>	12
<i>Valeriana tripteris</i>	24	<i>Leontodon hispidus</i>	12
<i>Chaerophyllum hirsutum</i>	23	<i>Melica nutans</i>	12
<i>Luzula sylvatica</i>	23	<i>Ranunculus oreophilus</i>	12
<i>Veratrum album</i>	23	<i>Saxifraga rotundifolia</i>	12

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Anthoxanthum odoratum agg.	22	Veronica chamaedrys agg.	12
Daphne mezereum	21	Athyrium filix-femina	11
Campanula scheuchzeri	20	Huperzia selago	11
Dicranum scoparium	20	Lycopodium annotinum	11
Hylocomium splendens	20	Myosotis sylvatica	11
Viola biflora	20	Polystichum lonchitis	11
Festuca flavescens	19	Pulsatilla alpina	11
Fragaria vesca	19	Senecio nemorensis	11
Rosa pendulina	19	Sorbus chamaemespilus	11
Rubus idaeus	19	Tortella tortuosa	11
Abies alba	18	Vaccinium uliginosum	11
Aster bellidiastrum	18	Achillea millefolium agg.	10
Calamagrostis villosa	18	Carduus defloratus agg.	10
Lotus corniculatus	17	Carex ferruginea	10
Rhododendron hirsutum	17	Ctenidium molluscum	10
Soldanella alpina	17	Lilium martagon	10
Calamagrostis varia	16	Maianthemum bifolium	10
Clematis alpina	16	Peucedanum ostruthium	10
Dryopteris carthusiana agg.	16	Pleurozium schreberi	10
Poa alpina	16	Polytrichum formosum	10
Hieracium prenanthoides	15	Trifolium pratense	10
Poa nemoralis	15		

*Linking in situ vegetation data to the EUNIS habitat classification: results for forest habitats***G3.3 - [Pinus uncinata] woodland**

**European Forest Type:** 3.1 Subalpine larch-arolla pine and dwarf pine forest

**Origin of data (countries):** AT, DU, IT, SK

**List of alliances:** ERI-01A, PIC-01A, PIC-01D

**Additional selection rules:** Instead of the relevés belonging to the listed alliances, relevés with a cover of *Pinus uncinata* > 15% and at the same time higher than any other tree species were assigned to this EUNIS type

**Implications for EUNIS classification:** G3.3 [*Pinus uncinata*] woodland should be merged into G3.2 [Alpine [*Larix*] - [*Pinus cembra*] woodland] (this category corresponds to the same phytosociological units, with *Pinus* species as the usual dominant)

**Implications for EFT classification:** n/a

**Floristic composition:**

<i>Pinus uncinata</i> var. <i>uncinata</i>	100	<i>Carex sempervirens</i>	20
<i>Vaccinium myrtillus</i>	81	<i>Daphne striata</i>	20
<i>Sesleria caerulea</i>	74	<i>Pinus sylvestris</i>	20
<i>Vaccinium vitis-idaea</i>	72	<i>Rhododendron ferrugineum</i>	20
<i>Erica herbacea</i>	70	<i>Selaginella selaginoides</i>	20
<i>Rubus saxatilis</i>	70	<i>Thymus praecox</i> agg.	20
<i>Sorbus aucuparia</i>	70	<i>Adenostyles alpina</i> subsp. <i>alpina</i>	18
<i>Homogyne alpina</i>	69	<i>Bazzania trilobata</i>	18
<i>Hylocomium splendens</i>	65	<i>Campanula scheuchzeri</i>	18
<i>Calamagrostis varia</i>	61	<i>Daphne mezereum</i>	18
<i>Polygala chamaebuxus</i>	61	<i>Globularia nudicaulis</i>	18
<i>Sorbus chamaemespilus</i>	60	<i>Gymnadenia conopsea</i>	18
<i>Picea abies</i>	58	<i>Gymnocarpium dryopteris</i>	18
<i>Potentilla erecta</i>	58	<i>Lilium martagon</i>	18
<i>Calluna vulgaris</i>	56	<i>Petasites paradoxus</i>	18
<i>Pleurozium schreberi</i>	54	<i>Vaccinium uliginosum</i>	18
<i>Valeriana tripteris</i>	54	<i>Biscutella laevigata</i>	16

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Rosa pendulina	52	Cetraria islandica	16
Rhododendron hirsutum	50	Convallaria majalis	16
Dicranum scoparium	49	Dactylorhiza maculata agg.	16
Hieracium murorum agg.	49	Dicranum polysetum	16
Juniperus communis	49	Geranium sylvaticum	16
Carex alba	47	Larix decidua	16
Carex flacca	47	Laserpitium latifolium	16
Melica nutans	47	Listera ovata	16
Prenanthes purpurea	47	Oreopteris limbosperma	16
Rhytidiadelphus triquetrus	47	Abies alba	14
Solidago virgaurea	45	Campanula rotundifolia agg.	14
Tofieldia calyculata	45	Carlina acaulis	14
Melampyrum pratense	43	Gymnadenia odoratissima	14
Acer pseudoplatanus	41	Leontodon hispidus	14
Amelanchier ovalis	41	Parnassia palustris	14
Knautia maxima	41	Plagiochila asplenioides	14
Lycopodium annotinum	40	Scabiosa lucida	14
Sphagnum quinquefarium	40	Valeriana saxatilis	14
Calamagrostis villosa	38	Arctostaphylos alpinus	12
Sorbus aria agg.	38	Brachypodium pinnatum subsp. pinnatum	12
Bupthalmum salicifolium	32	Campanula cochlearifolia	12
Carex digitata	32	Centaurea montana	12
Carex montana	32	Ctenidium molluscum	12
Lotus corniculatus	32	Deschampsia flexuosa	12
Molinia caerulea	32	Euphrasia salisburgensis	12
Oxalis acetosella	32	Galium boreale	12
Valeriana montana	32	Luzula sylvatica	12
Maianthemum bifolium	30	Polytrichum formosum	12
Phyteuma orbiculare	30	Sphagnum capillifolium	12
Ranunculus serpens	30	Veronica urticifolia	12
Epipactis atrorubens	29	Viola reichenbachiana	12
Tortella tortuosa	29	Aquilegia atrata	10
Fragaria vesca	27	Cladonia arbuscula	10



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Pinus mugo	27	Dryas octopetala	10
Ptilium crista-castrensis	27	Fagus sylvatica	10
Thesium alpinum	27	Globularia cordifolia	10
Carduus defloratus agg.	26	Goodyera repens	10
Aster bellidiastrum	25	Hieracium bifidum	10
Huperzia selago	25	Linum catharticum	10
Melampyrum sylvaticum	25	Listera cordata	10
Carex ferruginea	23	Peucedanum ostruthium	10
Cladonia rangiferina	23	Plagiothecium undulatum	10
Galium anisophyllum	23	Platanthera bifolia	10
Prunella grandiflora	23	Ptilidium ciliare	10
Polygonatum verticillatum	21	Tritomaria quinquedentata	10

**G3.4 - [Pinus sylvestris] woodland south of the taiga**

**European Forest Type:** 2.2 Nemoral Scots pine forest, 3.3 Alpine Scots pine and Black pine forest, 10.4 Mediterranean and Anatolian Scots pine forest

**Origin of data (countries):** AT, CZ, DE, ES, FR, GB, GR, HR, IT, NL, PL, RU, SI, SK, UA

**List of alliances:** BRA-01A, BRA-01B, BRA-01C, ERI-01A, ERI-01B, ERI-01D, ERI-02B, PIC-02A, PYR-01A, PYR-02A, SAB-01A, SAB-01C, SAB-01D, SAB-02A

**Additional selection rules:** n/a

**Implications for EUNIS classification:** G3.4' Temperate Continental Pinus sylvestris woodland, G3.4'' Temperate and sub-mediterranean montane Pinus-sylvestris-Pinis nigra woodland

**Implications for EFT classification:** 2.2 Nemoral Scots pine forest 2.4 Nemoral Black pine forest (G3.4'), 3.3 Alpine Scots pine & black pine forest (G3.4'')

**Floristic composition:**

Pinus sylvestris	82	Pteridium aquilinum	15
Deschampsia flexuosa	44	Hypnum cupressiforme	14
Sorbus aucuparia	42	Euphorbia cyparissias	14
Vaccinium myrtillus	41	Carex humilis	13
Pleurozium schreberi	39	Melica nutans	13
Betula pendula	36	Buphthalmum salicifolium	13
Quercus robur	32	Calamagrostis varia	13
Dryopteris carthusiana agg.	30	Dicranum polysetum	13
Picea abies	27	Luzula pilosa	13
Frangula alnus	27	Epipactis atrorubens	12
Dicranum scoparium	23	Polygonatum odoratum	12
Calluna vulgaris	23	Berberis vulgaris	12
Juniperus communis	22	Rhytidiadelphus triquetrus	12
Vaccinium vitis-idaea	21	Rubus fruticosus agg.	12
Fragaria vesca	20	Rubus saxatilis	11
Amelanchier ovalis	20	Betula pubescens	11
Hieracium murorum agg.	18	Polytrichum formosum	11

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Erica herbacea	18	Prunus serotina	11
Fagus sylvatica	18	Teucrium chamaedrys	11
Melampyrum pratense	18	Vincetoxicum hirundinaria	11
Polygala chamaebuxus	18	Potentilla erecta	10
Hylocomium splendens	17	Lotus corniculatus	10
Sesleria caerulea	17	Anthericum ramosum	10
Molinia caerulea	16	Galium boreale	10
Solidago virgaurea	16	Viola collina	10
Sorbus aria agg.	15		

**G3.5 - [Pinus nigra] woodland**

**European Forest Type:** 2.4 Nemoral Black pine forest, 10.2 Mediterranean and Anatolian Black pine forest

**Origin of data (countries):** AT, BA, CZ, DU, GB, GR, HR, IE, IT, NL, SI, SK, UA

**List of alliances:** ERI-01A, ERI-01C, ERI-01D, ERI-01F, ERI-02A, PUB-02N, PUB-03A, SAB-01A, SAB-01B, SAB-04A, SAB-04D

**Additional selection rules:** Instead of the relevés belonging to the listed alliances, relevés with a cover of *Pinus nigra* (including all its subspecies) > 15% and at the same time higher than any other tree species were assigned to this EUNIS type

**Implications for EUNIS classification:** G3.4'''' Mediterranean-montane *Pinus sylvestris*-*Pinus nigra* woodland, ??G3.5 [Pinus nigra] woodland should to be merged into the G3.4'' and G3.4'''' types

**Implications for EFT classification:** 10.2 Mediterranean and Anatolian Black pine forest 10.4 Mediterranean and Anatolian Scots pine forest (G3.4''')

**Floristic composition:**

<i>Pinus nigra</i>	96	<i>Lotus corniculatus</i>	16
<i>Amelanchier ovalis</i>	38	<i>Teucrium montanum</i>	16
<i>Polygala chamaebuxus</i>	38	<i>Phyteuma orbiculare</i>	15
<i>Sorbus aria</i> agg.	37	<i>Thalictrum minus</i>	15
<i>Sesleria caerulea</i>	36	<i>Asperula cynanchica</i>	14
<i>Carex humilis</i>	31	<i>Dactylis glomerata</i> agg.	14
<i>Teucrium chamaedrys</i>	30	<i>Dorycnium pentaphyllum</i> agg.	14
<i>Erica herbacea</i>	29	<i>Fraxinus excelsior</i>	14
<i>Anthericum ramosum</i>	26	<i>Quercus petraea</i> agg.	14
<i>Cyclamen purpurascens</i>	26	<i>Pimpinella saxifraga</i>	13
<i>Euphorbia cyparissias</i>	25	<i>Rhamnus saxatilis</i>	13
<i>Brachypodium sylvaticum</i>	22	<i>Daphne cneorum</i>	12
<i>Acer pseudoplatanus</i>	21	<i>Genista pilosa</i>	12
<i>Calamagrostis varia</i>	21	<i>Picea abies</i>	12
<i>Fagus sylvatica</i>	21	<i>Pinus sylvestris</i>	12

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Vincetoxicum hirundinaria	21	Sorbus aucuparia	12
Berberis vulgaris	20	Viola hirta	12
Buphthalmum salicifolium	20	Carex alba	11
Crataegus monogyna agg.	20	Juniperus oxycedrus	11
Hieracium murorum agg.	20	Ligustrum vulgare	11
Ostrya carpinifolia	20	Melica nutans	11
Fragaria vesca	19	Peucedanum oreoselinum	11
Fraxinus ornus	19	Thymus praecox agg.	11
Galium lucidum	19	Cornus mas	10
Polygonatum odoratum	18	Hieracium bifidum	10
Quercus pubescens	18	Hypnum cupressiforme	10
Cotoneaster tomentosus	17	Juniperus communis	10
Pteridium aquilinum	17	Laserpitium siler	10
Brachypodium pinnatum subsp. pinnatum	16	Tortella tortuosa	10
Globularia cordifolia	16	Viburnum lantana	10
Leontodon incanus	16		

**G3.6 - Subalpine mediterranean [Pinus] woodland****European Forest Type:** 10.5 Alti-Mediterranean pine forest**Origin of data (countries):** BA, GR, ME, XK**List of alliances:** ERI-01E, PIC-01F**Additional selection rules:** In addition to the relevés belonging to the listed alliances, relevés with a cover of *Pinus heldreichii* or *P. peuce* > 15% and at the same time higher than any other tree species were assigned to EUNIS type**Implications for EUNIS classification:** proposed new name: Mediterranean and Balkan subalpine *Pinus heldreichii*-*peucis* woodland**Implications for EFT classification:** n/a**Floristic composition:**

<i>Pinus heldreichii</i>	93	<i>Myosotis sylvatica</i>	15
<i>Juniperus communis</i>	58	<i>Rhamnus alpinus</i> subsp. <i>fallax</i>	15
<i>Fragaria vesca</i>	50	<i>Teucrium chamaedrys</i>	15
<i>Euphorbia amygdaloides</i>	45	<i>Dorycnium pentaphyllum</i> agg.	14
<i>Vaccinium myrtillus</i>	39	<i>Euphorbia cyparissias</i>	14
<i>Aremonia agrimonoides</i>	37	<i>Fraxinus ornus</i>	14
<i>Fagus sylvatica</i>	37	<i>Leucanthemum vulgare</i> agg.	14
<i>Brachypodium pinnatum</i> subsp. <i>pinnatum</i>	32	<i>Luzula sylvatica</i>	14
<i>Acinos alpinus</i>	29	<i>Brachypodium sylvaticum</i>	13
<i>Stachys officinalis</i>	28	<i>Lotus corniculatus</i>	13
<i>Thymus praecox</i> agg.	27	<i>Potentilla australis</i>	13
<i>Anemone nemorosa</i>	24	<i>Senecio rupestris</i>	13
<i>Galium lucidum</i>	24	<i>Sesleria robusta</i>	13
<i>Valeriana montana</i>	24	<i>Veratrum album</i>	13
<i>Abies alba</i>	23	<i>Anthoxanthum odoratum</i> agg.	12
<i>Erica herbacea</i>	22	<i>Cerastium decalvans</i>	12
<i>Cotoneaster tomentosus</i>	21	<i>Gentiana asclepiadea</i>	12
<i>Daphne mezereum</i>	21	<i>Sesleria autumnalis</i>	12

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Hieracium murorum agg.	21	Tanacetum corymbosum	12
Scabiosa cinerea subsp. cinerea	21	Bupthalmum salicifolium	11
Mycelis muralis	20	Campanula glomerata	11
Primula veris	20	Cyclamen purpurascens	11
Rosa pendulina	20	Daphne blagayana	11
Scabiosa columbaria	20	Galium rotundifolium	11
Veronica officinalis	20	Knautia drymeia	11
Festuca heterophylla	19	Linum capitatum	11
Asperula aristata	18	Peucedanum oreoselinum	11
Pinus peuce	18	Satureja montana subsp. illyrica	11
Sesleria tenuifolia	18	Trifolium repens	11
Viola reichenbachiana	18	Amphoricarpos neumayeri	10
Luzula luzulina	17	Asplenium trichomanes	10
Ostrya carpinifolia	17	Cephalanthera rubra	10
Picea abies	17	Clinopodium vulgare	10
Pinus nigra	17	Digitalis grandiflora	10
Veronica chamaedrys agg.	17	Minuartia baldaccii	10
Buxus sempervirens	16	Polygala alpestris subsp. croatica	10
Daphne oleoides	16	Polystichum lonchitis	10
Gentiana clusii	16	Potentilla crantzii	10
Globularia cordifolia	16	Potentilla micrantha	10
Hieracium hoppeanum	16	Senecio thapsoides subsp. visianianus	10
Teucrium montanum	16	Stachys scardica	10
Thalictrum minus	16	Verbascum nicolai	10

*Linking in situ vegetation data to the EUNIS habitat classification: results for forest habitats***G3.7 - Lowland to montane mediterranean [Pinus] woodland (excluding [Pinus nigra])**

**European Forest Type:** 2.7 Atlantic Maritime pine forest, 10.1 Mediterranean pine forest

**Origin of data (countries):** BE, ES, FR, GB, GR, IT, MO, NL

**List of alliances:** QUI-01A, QUI-01G, QUI-02B, QUI-02E, QUI-03D, QUI-03H, SAB-04A

**Additional selection rules:** Instead of the relevés belonging to the listed alliances, relevés with a cover of *Pinus pinaster*, *P. pinea*, *P. halepensis* (including its subspecies) > 15% and at the same time higher than any other tree species were assigned to this EUNIS type

**Implications for EUNIS classification:** proposed new name: Mediterranean lowland to submontane *Pinus* woodland

**Implications for EFT classification:** n/a

**Floristic composition:**

<i>Pinus halepensis</i>	62	<i>Galium rubrum</i>	17
<i>Rubia peregrina</i>	59	<i>Pistacia terebinthus</i>	17
<i>Quercus ilex</i> subsp. <i>ilex</i>	45	<i>Stachelina dubia</i>	17
<i>Pistacia lentiscus</i>	43	<i>Crataegus monogyna</i> agg.	16
<i>Dactylis glomerata</i> agg.	42	<i>Odontites luteus</i>	16
<i>Thymus vulgaris</i>	41	<i>Teucrium montanum</i>	16
<i>Smilax aspera</i>	38	<i>Daphne gnidium</i>	15
<i>Juniperus oxycedrus</i>	37	<i>Genista hispanica</i>	15
<i>Pinus pinaster</i>	37	<i>Myrtus communis</i>	15
<i>Asparagus acutifolius</i>	36	<i>Arisarum vulgare</i>	14
<i>Lonicera implexa</i>	34	<i>Asperula cynanchica</i>	14
<i>Rhamnus alaternus</i>	31	<i>Centranthus ruber</i>	14
<i>Rosmarinus officinalis</i>	30	<i>Cephalaria leucantha</i>	14
<i>Phillyrea angustifolia</i>	29	<i>Argyrolobium zanonii</i>	13
<i>Teucrium chamaedrys</i>	28	<i>Catananche caerulea</i>	13
<i>Clematis flammula</i>	26	<i>Reichardia picroides</i>	13
<i>Ononis minutissima</i>	25	<i>Calluna vulgaris</i>	12



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Hedera helix	22	Coriaria myrtifolia	12
Arbutus unedo	21	Knautia purpurea	12
Carex hallerana	21	Ononis spinosa	12
Quercus coccifera	21	Cistus monspeliensis	11
Rubus ulmifolius	21	Coris monspeliensis	11
Cistus albidus	20	Echinops ritro	11
Psoralea bituminosa	20	Onobrychis supina	11
Hieracium pilosella	19	Pteridium aquilinum	11
Sanguisorba minor	19	Sorbus domestica	11
Bromus erectus	18	Fumana thymifolia	10
Coronilla minima	18	Galium mollugo agg.	10
Erica arborea	18	Helianthemum oelandicum subsp. italicum	10
Euphorbia spinosa	18	Leuzea conifera	10
Spartium junceum	18	Ranunculus bulbosus	10
Daucus carota	17	Ruscus aculeatus	10
Eryngium campestre	17	Thesium divaricatum	10

**G3.8 - Canary Island [*Pinus canariensis*] woodland****European Forest Type:** 10.3 Canarian pine forest**Origin of data (countries):** ES**List of alliances:** CAN-01A**Additional selection rules:** In addition to the relevés belonging to listed alliance, relevés with a cover of *Pinus canariensis* > 15% and at the same time higher than any other tree species were assigned to this EUNIS type**Implications for EUNIS classification:** proposed new name: *Pinus canariensis* woodland**Implications for EFT classification:** n/a**Floristic composition:**

<i>Pinus canariensis</i>	100	<i>Myrica faya</i>	16
<i>Asphodelus gracilis</i>	30	<i>Lotus campylocladus</i>	15
<i>Erica arborea</i>	30	<i>Pterocephalus lasiospermus</i>	12
<i>Cistus monspeliensis</i>	28	<i>Micromeria benthamii</i>	10
<i>Cistus symphytifolius</i>	26	<i>Scrophularia glabrata</i>	10

### **G3.9 - Coniferous woodland dominated by [Cupressaceae] or [Taxaceae]**

**European Forest Type:** 10.7 Juniper forest, 10.8 Cypress forest, 10.9 Cedar forest, 10.10 Tetraclinis articulata stands, 10.11 Mediterranean yew stands

**Origin of data (countries):** AT, BA, BG, CH, CZ, DU, ES, FI, FR, GB, GR, HR, IE, IT, NL, NO, PL, RO, RU, SI, SK, SM, UA, XK

**List of alliances:** AZO-01A, CAN-01B, FAG-01C, FAG-02A, FAG-03C, OLE-01A, QUI-01F, QUI-02C, SAB-01B, SAB-04B, SAB-04C, SAB-04D

**Additional selection rules:** Relevés belonging to alliance FAG-02A were not included

**Implications for EUNIS classification:** G3.9' Taxus baccata woodland, G3.9' Mediterranean Cupressaceae woodland, G3.9'' Macaronesian Juniperus woodland

**Implications for EFT classification:** 10.11 Mediterranean yew stands (G3.9'), 10.7 Juniper forest (some) (G3.9'), 10.8 Cypress forest (G3.9'), 10.9 Cedar forest (G3.9'), 10.10 Tetrac (G3.9'), 10.7 Juniper forest (some) (G3.9'')

**Floristic composition:**

Juniperus communis	57	Vaccinium myrtillus	13
Rubia peregrina	15	Pistacia lentiscus	11
Deschampsia flexuosa	14	Crataegus monogyna agg.	11
Calluna vulgaris	14	Lotus corniculatus	10
Brachypodium pinnatum subsp. pinnatum	14	Pinus sylvestris	10
Teucrium chamaedrys	13	Juniperus oxycedrus	10
Juniperus phoenicea	13	Ligustrum vulgare	10

**G3.A - [Picea] taiga woodland****European Forest Type:** 1.1 Spruce and spruce-birch boreal forest**Origin of data (countries):** FI**List of alliances:** PIC-01A, PIC-03A, PIC-05A**Additional selection rules:** From alliance PIC-01A, only relevés from Norway, Sweden, Finland, Estonia and Russia north of 57°N were selected**Implications for EUNIS classification:** proposed new name: Picea taiga woodland**Implications for EFT classification:** n/a**Floristic composition:**

Picea abies	100	Cladonia rangiferina	21
Vaccinium myrtillus	91	Lycopodium annotinum	21
Juniperus communis	87	Solidago virgaurea	21
Vaccinium vitis-idaea	87	Dicranum drummondii	19
Betula pubescens	76	Cetraria islandica	17
Pleurozium schreberi	76	Linnaea borealis	17
Pinus sylvestris	65	Polytrichum commune	17
Deschampsia flexuosa	63	Betula nana	14
Hylocomium splendens	57	Cladonia bellidiflora	14
Vaccinium uliginosum	51	Cladonia deformis	14
Empetrum nigrum agg.	48	Cladonia ecmocyna	14
Dicranum fuscescens	46	Populus tremula	14
Calluna vulgaris	38	Trientalis europaea	14
Cladonia arbuscula	38	Carex globularis	12
Barbilophozia lycopodioides	36	Cornus suecica	12
Dicranum majus	31	Diphasiastrum complanatum	12
Maianthemum bifolium	29	Cladonia uncialis	10
Sorbus aucuparia	29	Diphasiastrum alpinum	10
Melampyrum pratense	27	Melampyrum sylvaticum	10

**G3.B - [Pinus] taiga woodland****European Forest Type:** 1.2 Pine and pine-birch boreal forest**Origin of data (countries):** FI**List of alliances:** PIC-02A, PIC-02B**Additional selection rules:** From alliance PIC-02A, only relevés from Norway, Sweden, Finland, Estonia and Russia north of 57°N were selected**Implications for EUNIS classification:** proposed new name: *Pinus sylvestris* taiga woodland**Implications for EFT classification:** n/a**Floristic composition:**

<i>Empetrum nigrum</i> agg.	101	<i>Cladonia uncialis</i>	18
<i>Pinus sylvestris</i>	100	<i>Juniperus communis</i>	15
<i>Vaccinium vitis-idaea</i>	90	<i>Arctostaphylos alpinus</i>	13
<i>Vaccinium myrtillus</i>	61	<i>Betula nana</i>	13
<i>Deschampsia flexuosa</i>	52	<i>Cladonia bellidiflora</i>	13
<i>Picea abies</i>	29	<i>Cladonia coccifera</i>	13
<i>Vaccinium uliginosum</i>	27	<i>Dicranum flexicaule</i>	13
<i>Calluna vulgaris</i>	22	<i>Cetraria ericetorum</i>	11
<i>Cladonia arbuscula</i>	18	<i>Solidago virgaurea</i>	11
<i>Cladonia deformis</i>	18		

### **G3.C - [Larix] taiga woodland**

**European Forest Type:** n/a

**Origin of data (countries):** n/a

**List of alliances:** PIC-02B, PIC-05A

**Additional selection rules:** Instead of the relevés belonging to the listed alliances, relevés with a cover of *Larix sibirica* > 15% and at the same time higher than any other tree species were assigned to this EUNIS type, provided these relevés were the areas north of 57°N

**Implications for EUNIS classification:** proposed new name: Larix taiga woodland

**Implications for EFT classification:** n/a

**Floristic composition:**

No data

**G3.D - Boreal bog conifer woodland****European Forest Type:** 11.1 Spruce mire forest, 11.2 Pine mire forest**Origin of data (countries):** FI**List of alliances:** OXY-02B, PIC-05A, VAC-01A, VAC-01B, VAC-02A, VAC-03A

**Additional selection rules:** From the listed alliances only those relevés with a cover of *Picea abies*, *P. obovata*, *Pinus sylvestris* or *Larix sibirica* > 5% were assigned to this category; in addition, relevés not assigned to these alliances but having a cover of these tree species > 5% and at the same time a cover of *Sphagnum magellanicum*, *S. fuscum*, *S. fallax*, *S. flexuosum*, *S. angustifolium*, *S. rubellum* or *S. russowii* > 50% were assigned; relevés from other areas than Norway, Sweden, Finland, Estonia and Russia north of 57°N were excluded

**Implications for EUNIS classification:** proposed new name: Boreal bog conifer woodland**Implications for EFT classification:** n/a**Floristic composition:**

<i>Deschampsia flexuosa</i>	100	<i>Molinia caerulea</i>	50
<i>Juniperus communis</i>	100	<i>Pinus sylvestris</i>	50
<i>Picea abies</i>	100	<i>Vaccinium uliginosum</i>	50
<i>Solidago virgaurea</i>	100	<i>Vaccinium vitis-idaea</i>	50
<i>Sphagnum russowii</i>	100	<i>Andromeda polifolia</i>	25
<i>Trientalis europaea</i>	100	<i>Cornus suecica</i>	25
<i>Vaccinium myrtillus</i>	100	<i>Dicranum polysetum</i>	25
<i>Betula pubescens</i>	75	<i>Empetrum nigrum</i> agg.	25
<i>Carex globularis</i>	75	<i>Gymnocarpium dryopteris</i>	25
<i>Dicranum fuscescens</i>	75	<i>Linnaea borealis</i>	25
<i>Hylocomium splendens</i>	75	<i>Lycopodium annotinum</i>	25
<i>Mylia anomala</i>	75	<i>Maianthemum bifolium</i>	25
<i>Polytrichum commune</i>	75	<i>Phegopteris connectilis</i>	25
<i>Sorbus aucuparia</i>	75	<i>Sphagnum recurvum</i> agg.	25
<i>Alnus incana</i>	50	<i>Sphagnum teres</i>	25
<i>Barbilophozia lycopodioides</i>	50	<i>Vaccinium oxycoccos</i> agg.	25

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Melampyrum pratense

50



**G3.E - Nemoral bog conifer woodland****European Forest Type:** 11.1 Spruce mire forest, 11.2 Pine mire forest**Origin of data (countries):** AT, BG, CZ, DE, DU, ES, FR, GB, PL, SI, SK**List of alliances:** OXY-02B, VAC-01A, VAC-01B, VAC-02A

**Additional selection rules:** From the listed alliances, only those relevés with a cover of *Picea abies*, *Pinus sylvestris* or *P. uncinata* v. *rotundata* > 5% were assigned to this category; in addition, relevés not assigned to these alliances but having a cover of these tree species > 5% and at the same time a cover of *Sphagnum magellanicum*, *S. fuscum*, *S. fallax*, *S. flexuosum*, *S. angustifolium*, *S. rubellum* or *S. russowii* > 50% were assigned; relevés from Norway, Sweden, Finland, Estonia and Russia north of 57°N were excluded

**Implications for EUNIS classification:** proposed new name: Temperate bog conifer woodland**Implications for EFT classification:** n/a**Floristic composition:**

<i>Vaccinium myrtillus</i>	75	<i>Deschampsia flexuosa</i>	20
<i>Sphagnum recurvum</i> agg.	73	<i>Melampyrum pratense</i>	20
<i>Picea abies</i>	68	<i>Andromeda polifolia</i>	18
<i>Eriophorum vaginatum</i>	67	<i>Dicranum scoparium</i>	18
<i>Vaccinium vitis-idaea</i>	58	<i>Drosera rotundifolia</i>	18
<i>Sphagnum magellanicum</i>	57	<i>Eriophorum angustifolium</i>	18
<i>Vaccinium oxycoccos</i> agg.	56	<i>Frangula alnus</i>	18
<i>Pinus sylvestris</i>	53	<i>Pinus uncinata</i> var. <i>rotundata</i>	18
<i>Vaccinium uliginosum</i>	47	<i>Calamagrostis villosa</i>	17
<i>Molinia caerulea</i>	45	<i>Potentilla erecta</i>	16
<i>Betula pubescens</i>	41	<i>Carex echinata</i>	15
<i>Calluna vulgaris</i>	39	<i>Sphagnum russowii</i>	15
<i>Pleurozium schreberi</i>	38	<i>Carex rostrata</i>	13
<i>Polytrichum commune</i>	38	<i>Sphagnum girgensohnii</i>	13
<i>Polytrichum strictum</i>	36	<i>Dryopteris carthusiana</i> agg.	12
<i>Carex nigra</i>	27	<i>Sorbus aucuparia</i>	12

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Aulacomnium palustre	23	Betula pendula	11
Ledum palustre	21	Trientalis europaea	11
Sphagnum capillifolium	21		