V Sloveniji navzoči habitatni tipi iz Habitatnega priročnika EU

4070 * Bushes with Pinus mugo and Rhododendron hirsutum (Mugo-Rhododendretum hirsuti)

PAL.CLASS.: 31.5

1) Pinus mugo formations usually with Rhododendron spp of the dry eastern inner Alps, the northern and ***southeastern outer Alps***, the southwestern Alps and the Swiss Jura, the eastern greater Hercynian ranges, the Carpathians, the Apennines, the Dinarides and the neighbouring Pelagonides, the Pirin, the Rila and ***the Balkan Range***;

2) Plants: Pinus mugo, Rhododendron hirsutum, R. ferrugineum. Rhodothamnus chamaecistus

3) Corresponding categories

German classification: "6905 Alpenrosengebüsch", "6904 Latschengebüsch".

9110 Luzulo-Fagetum beech forests

PAL.CLASS.: 41.11

1) Fagus sylvatica and, in higher mountains, Fagus sylvatica-Abies alba or Fagus sylvatica-Abies alba-Picea abies forests developed on acid soils of the medio-European domain of central and northern Central Europe, with Luzula luzuloides, Polytrichum formosum and often Deschampsia flexuosa, Calamagrostis villosa, Vaccinium myrtillus, Pteridium aquilinum.

The following sub-types are included:

41.111 Medio-European collinar woodrush beech forests

Acidophilous Fagus sylvatica forests of the lesser Hercynian ranges and Lorraine, of the collinar level of the greater Hercynian ranges, the Jura and the Alpine periphery, of the western sub-Pannonic and the intra-Pannonic hills, not or little accompanied by self sown conifers, and generally with an admixture of Quercus petraea, or in some cases Quercus robur, in the canopy.

41.112 Medio-European montane woodrush beech forests

Acidophilous forests of Fagus sylvatica, Fagus sylvatica and Abies alba or Fagus sylvatica, Abies alba and Picea abies of the montane and high-montane levels of the greater Hercynian ranges, from the Vosges and the Black Forest to the Bohemian Quadrangle, the Jura, the Alps, the Carpathians and the Bavarian Plateau.

2) Plants: Fagus sylvatica, Abies alba, Picea abies, Luzula luzuloides, Polytrichum formosum and often Deschampsia flexuosa, Calamagrostis villosa, Vaccinium myrtillus, Pteridium aquilinum.

3) Corresponding categories

Nordic classification: "2221 Fagus sylvatica-Deschampsia flexuosa-Vaccinium myrtillus-typ"

5) Lindgren, L. (1970). Beech forest vegetation in Sweden - a survey. Bot. Notiser 123:401-421.

9180 * Tilio-Acerion forests of slopes, screes and ravines

PAL.CLASS.: 41.4

1) Mixed forests of secondary species (Acer pseudoplatanus, Fraxinus excelsior, Ulmus glabra, Tilia cordata) of coarse scree, abrupt rocky slopes or coarse colluvions of slopes, particularly on calcareous, but also on siliceous, substrates (Tilio-Acerion Klika 55). A distinction can be made between one grouping which is typical of cool and humid environments (hygroscopic and shade tolerant forests), generally dominated by the sycamore maple (Acer pseudoplatanus) - sub-alliance Lunario-Acerenion, and another which is typical of dry, warm screes (xerothermophile forests), generally dominated by limes (Tilia cordata, T. platyphyllos) - sub-alliance Tilio-Acerenion.

The habitat types belonging to the Carpinion should not be included here.

2) Plants: Lunario-Acerenion - Acer pseudoplatanus, Actaea spicata, Fraxinus excelsior, Helleborus viridis, Lunaria rediviva, Taxus baccata, Ulmus glabra. Tilio-Acerenion - Carpinus betulus, Corylus avellana, Quercus sp., Sesleria varia, Tilia cordata, T. platyphyllos.

3) Corresponding categories

United Kingdom classification: "W8 Fraxinus excelsior-Acer campestre-Mercurialis perennis woodland" and "W9 Fraxinus excelsior-Sorbus aucuparia-Mercurialis perennis woodland". German classification: "430604 Sommerlinden-Begulmen-Blockschuttwald", "430603 Ahorn-Linden-Hangschuttwald (wärmere Standorte)", "430602 Eschen-Ahorn-Schlucht- bzw. -Hangwald (fleucht-kühle Standorte)", "430601 Sommerlinden-Hainbuchen-Schuttwald". Nordic classification: "2233

Ulmus glabra -typ", "2235 Tilia cordata -typ" and "2236 Quercus robur-Ulmus glabra-Tilia cordata-typ". In Boreal region corresponding species-poor communities often with Anemone nemorosa, Corydalis spp., Primula veris.
4) Slight changes in the conditions of the substrate (especially "consolidated" substrate) or humidity produce a transition towards beech forests (Cephalanthero-Fagenion, Luzulo-Fagenion) or towards thermophile oak forests.
5) Bergendorff, C., Larsson, A. & Nihlgard, B. (1979). Sydliga lövskogsbestand i Sverige. Statens naturvardsverk. Rapport. SNV PM 1278, Solna, 68 pp.

91D0 * Bog woodland

PAL.CLASS.: 44.A1 to 44.A4
1) Coniferous and broad-leaved forests on a humid to wet peaty substrate, with the water level permanently high and even higher than the surrounding water table. The water is always very poor in nutrients (raised bogs and acid fens). These communities are generally dominated by Betula pubescens, Frangula alnus, Pinus sylvestris, Pinus rotundata and Picea abies, with species specific to bogland or, more generally, to oligotrophic environments, such as Vaccinium spp., Sphagnum spp., Carex spp. [Vaccinio-Piceetea: Piceo-Vaccinienion uliginosi (Betulion pubescentis, Ledo-Pinion) i.a.]. In the Boreal region, also spruce swamp woods, which are minerotrophic mire sites along margins of different mire complexes, as well as in separate strips in valleys and along brooks.
Sub-types :

- 44.A1 - Sphagnum birch woods
- 44.A2 - Scots pine mire woods
- 44.A3 - Mountain pine bog woods
- 44.A4 - Mire spruce woods

In most of the Irish sites, these forests represent sub types of raised bogs, generally degraded and invaded by commercial forestry species; however, those stands dominated by Betula pubescens or Pinus sylvestris may be of interest. In Greece, formations with Pinus sylvestris are confined to the northern mountains, where forests of Picea abies on a sphagnum rich ground layer also occur.
2) Plants: Agrostis canina, Betula pubescens, B. carpatica, Carex canescens, C. echinata, C. nigra, C. rostrata, Frangula alnus, Juncus acutiflorus, Molinia caerulea, Trientalis europaea, Picea abies, Pinus rotundata, P. sylvestris, Sphagnum spp., Vaccinium oxycoccus, V. uliginosum, Viola palustris; in spruce swamp woods also: Carex disperma, C. tenuiflora, Diplazium sibiricum, Hylocomium umbratum and Rhytidiadelphus triquetrus.
3) Corresponding categories
United Kingdom classification : "W4 Betula pubescens-Molinia caerulea woodland".
German classification: "430101 Birken-Moorwald", "440104 Latschen-Moorwald", "440101 Fichten-Moorwald", "440103 Spirken-Moorwald", "440102 Waldkiefern-Moorwald".
Nordic classification: "311 Skogsmossevegetation", "321 Skogs-och krattkärrvegetation".
4) Forests on the edge of upland bogs or transition mires may form a transition towards swamp forests (Alnetea glutinosa, Alno-Ulmion pp.).
5) Dierssen, B. & Dierssen, K. (1982). Kiefernreiche Phytocoenosen oligotropher Moore im mittleren und nordwestlichen Europa. Überlegungen zur Problematik ihrer Zuordnung zu höheren syn systematischen Einheiten. In:Dierschke, H. (ed.) Struktur und Dynamic von Wäldern. Ber. Intern. Symp. IVV 1982, pp. 299-331.

91E0 * Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Pandion, Alnion incanae, Salicion albae)

PAL.CLASS.: 44.3, 44.2 and 44.13
1) Riparian forests of Fraxinus excelsior and Alnus glutinosa, of temperate and Boreal Europe ***lowland and hill watercourses*** (44.3: Alno-Padion); riparian woods of Alnus incanae of ***montane and sub-montane rivers of the Alps*** and the northern Apennines (44.2: Alnion incanae); arborescent galleries of tall Salix alba, S. fragilis and Populus nigra, along medio-European lowland, hill or sub-montane rivers (44.13: Salicion albae). ***All types occur on heavy soils (generally rich in alluvial deposits) periodically inundated by the annual rise of the river (or brook) level, but otherwise well-drained and aerated during low-water***. The herbaceous layer invariably includes many large species (Filipendula ulmaria, Angelica sylvestris, Cardamine spp., Rumex sanguineus, Carex spp., Cirsium oleraceum) and various vernal geophytes can occur, such as Ranunculus ficaria, Anemone nemorosa, A. ranunculoides, Corydalis solida.
This habitat includes several sub-types:

- ash-alder woods of springs and their rivers (44.31 - Carici remotae-Fraxinetum);

ash-alder woods of fast-flowing rivers (44.32 - Stellario-Alnetum glutinosae);
ash-alder woods of slow-flowing rivers (44.33 - Pruno-Fraxinetum, Ulmo-Fraxinetum);
montane grey alder galleries (44.21 - Calamagrosti variae-Alnetum incanae Moor 58);
sub-montane grey alder galleries (44.22 - Equiseto hyemalis-Alnetum incanae Moor 58);
white willow gallery forests (44.13 - Salicion albae). The Spanish types belong to the alliance Osmundo-Alnion (Cantabric atlantic and southeast Iberia peninsula).

2) Plants: Tree layer - Alnus glutinosa, Alnus incanae, Fraxinus excelsior; Populus nigra, Salix alba, S. fragilis; Betula pubescens, Ulmus glabra; Herb layer - Angelica sylvestris, Cardamine amara, C. pratensis, Carex acutiformis, C. pendula, C. remota, C. strigosa, C. sylvatica, Cirsium oleraceum, Equisetum telmateia, Equisetum spp., Filipendula ulmaria, Geranium sylvaticum, Geum rivale, Lycopus europaeus, Lysimachia nemorum, Rumex sanguineus, Stellaria nemorum, Urtica dioica.
3) Corresponding categories
United Kingdom classification: "W5 Alnus glutinosa-Carex paniculata woodland", "W6 Alnus glutinosa-Urtica dioica woodland)" and "W7 Alnus glutinosa-Fraxinus excelsior-Lysimachia nemorum woodland".
German classification: "43040401 Weichholzauenwald mit weitgehend ungertörter Überflutungsdynamik", "43040402 Weichholzauenwald ohne Überflutung", "430403 Schwarzerlenwald (an Fließgewässern)", "430402 Eschenwald (an Fließgewässern)", "430401 Grauerlenauenwald (montan, Alpenvorland, Alpen).
Nordic classification: "2234 Fraxinus excelsior-typ" and "224 Alskog".
4) Most of these forests are in contact with humid meadows or ravine forests (Tilio-Acerion). A succession towards Carpinion (Primulo-Carpinetum) can be observed.
5) Brunet, J. (1991). Vegetation i Skanes alm- och askskogar. Sven. Bot. Tidskr. 85:377-384.

91F0 Riparian mixed forests of Quercus robur, Ulmus laevis and Ulmus minor, Fraxinus excelsior or Fraxinus angustifolia, along the great rivers (Ulmenion minoris)

PAL.CLASS.: 44.4
1) Forests of hardwood trees of the major part of the river bed, liable to flooding during regular rising of water level or, of low areas liable to flooding following the raising of the water table. These forests develop on recent alluvial deposits. The soil may be well drained between inondations or remain wet. Following the hydric regime, the woody dominated species belong to Fraxinus, Ulmus or Quercus genus. The undergrowth is well developed.
2) Plants: Quercus robur, Ulmus laevis, U. minor, U.glabra, Fraxinus excelsior, Fraxinus angustifolia, Populus nigra, P. canescens, P. tremula, Alnus glutinosa, Prunus padus, Humulus lupulus, Vitis vinifera ssp. sylvestris, Tamus communis, Hedera helix, Phalaris arundinacea, Corydalis solida, Gagea lutea, Ribes rubrum.
3) Corresponding categories
German classification: "43040501 Hartholzauenwald mit weitehend ungestörter Überflutungsdynamik", "43040502 Hartholzauenwald ohne Überflutung".
Nordic classification: "2223 Ulmus glabra-typ", "2236 Quercus robur-Ulmus glabra-Tilia cordata typ".
4) These forests form mosaics with pioneer or stable forests of soft wood trees, in low areas of the river bed; they may develop also from alluvial forests of hard wood trees. This habitat type often occurs in conjunction with alder-ash woodlands (44.3).

91K0 Illyrian Fagus sylvatica forests (Aremonio-Fagion)

PAL.CLASS.: 41.1C
1) Fagus sylvatica forests of the Dinarides and of associated ranges and hills, with outliers and irradiations in the southeastern Alps and in the mid-Pannonic hills. In these areas they are in contact with, or interspersed among, medio-European beech forests such as 9130, 9140 and 9150. Species diversity is greater than in the Central European beech woods and the Aremonio-Fagion constitutes an important centre of species diversity.
2) Plants:. Fagus sylvatica, F. moesiaca, Acer obtusatum, Ostrya carpinifolia, Abies alba, Quercus cerris, Sorbus graeca, Tilia tomentosa, Anemone trifolia, Aremonia agrimonioides, Calamintha grandiflora, Cardamine trifolia, C. waldsteinii, Corylus colurna, Cotoneaster tomentosa, Cyclamen purpurascens, Dentaria enneaphyllos, Dentaria trifolia, Doronicum austriacum, Epimedium alpinum, Euphorbia carniolica, Hacquetia epipactis, Helleborus niger ssp. niger, H. odorus, Knautia drymeia, Lamium orvala, Lonicera nigra, Omphalodes verna, Pancicia serbica, Primula vulgaris, R.

hypoglossum, Ruscus spp. Saxifraga lasiophylla, Scopolia carniolica, Scrophularia scopolii, Sesleria autumnalis, Vicia oroboides

5) Borhidi, A. (1963). Die Zönologie des Verbandes Fagion illyricum. I. Allgemeiner Teil. - Acta Bot. Acad. Sci. Hung. 9: 259-297.
Borhidi,A. (1965). Die Zönologie des Verbandes Fagion illyricum. II. Systematischer Teil. - Acta Bot. Acad. Sci. Hung. 13: 53-102.
Horvat, I., Glavac, V. & Ellenberg, H. (1974). Vegetation Süd-Osteuropas. Stuttgart, pp. 768.
Maricek, L., Mucina, L., Zupanic, L., Poldini, I., Dakskobler, I. & Acceto, M. (1992). Nomenklatorische Revision der Illyrischen Buchenwälder (Verband Aremonio-Fagion). Studia Geobotanica 13b: 121-135.
Török, K., Podani, J. & Borhidi, A. (1989:). Numerical revision of Fagion illyricum alliance. - Vegetatio, 81: 169-180.

91L0 Illyrian oak –hornbeam forests (Erythronio-Carpinion)

PAL.CLASS.: 41.2A

1) Forests of Quercus robur or Q. petraea, sometimes Q. cerris, and Carpinus betulus on both calcareous and siliceous bedrocks, mostly on deep neutral to slightly acidic brown forest soils, with mild humus in the SE-Alpine-Dinaric region, West- and Central Balkans extending northwards to Lake Balaton mostly in hilly and submontane regions, river valleys and the plains of the Drava and Sava. The climate is more continental than in sub-Mediterranean regions and warmer than in middle Europe; these forests are intermediate between oak-hornbeam woods (e.g. 9170) of central Europe and those of the Balkans and merge northwards into the Pannonic oak woods (91G0). They have a much higher species richness than the Central European oak woods. Outliers of these forests also occur in Frioul and the northern Apennines.

2) Plants:.Quercus robur, Q. petraea, Q. cerris, Carpinus betulus, Acer tataricum, Tilia tomentosa, Castanea sativa, Fraxinus angustifolia subsp. pannonica, Euonymus verrucosa, Lonicera caprifolium, Adoxa moschatellina Cyclamen purpurascens, Dentaria pentaphyllos, Epimedium alpinum, Erythronium dens-canis, Knautia drymeia, Helleborus macranthus, H. dumetorum ssp. atrorubens, H. cyclophyllus, Asperula taurina, Lathyrus venetus, Potentilla micrantha, Dianthus barbatus, Luzula forsteri, Primula vulgaris, Pseudostellaria europaea, Ruscus aculeatus, Tamus communis.

5) Borhidi, A. (1967). Die geobotanischen Verhältnisse der Eichen-Hainbuchenwälder Südosteuropas. Feddes Repert. 77: 296-316.
Borhidi, A. & Kevey, B. (1996). An annotated checklist of the Hungarian plant communities. II. The forest vegetation. In: Borhidi, A. (ed.): Critical Revision of the Hungarian Plant Communities. Janus Pannonius Univ. Pécs, 95-138.
Marincek, L. (1994). Zur Nomenklatur der Hainbuchenwälder des Erythronio-Carpinion. Simpozij-Pevalek (Zagreb): 57-62

91R0 Dinaric dolomite Scots pine forests (Genisto januensis-Pinetum)

PAL.CLASS.: 42.5C52

1) Pinus sylvestris woods of dolomites and ***dolomite rendzinas of the Dinarides***. They are developed within the Illyrian beech forest zone (91K0) and often occupy somewhat higher elevations than the similar dolomite Pinus nigra woods of unit 42.6214.

2) Plants: Pinus sylvestris, Erica herbacea, E. carnea, Galium lucidum, Genista januensis, Aquilegia vulgaris, Buphthalmum salicifolium, Teucrium chamaedrys, Carex humilis, Anthericum ramosum, Cyclamen purpurascens, Polygala chamaebuxus, Hepatica nobilis, Geranium sanguineum, Helleborus niger ssp. macranthus, Epipactis atrorubens, Carex alba.

9410 Acidophilous Picea forests of the montane to alpine levels (Vaccinio-Piceetea)

PAL.CLASS.: 42.21 to 42.23, 42.25

1) Sub-alpine and alpine conifer forests (dominated by Picea abies and Picea orientalis).

Sub-types:

42.21 - Alpine and Carpathian sub-alpine spruce forests. Piceetum subalpinum.
Picea abies forests of the lower sub-alpine level, and of anomalous stations in the montane level, of the outer, intermediate and inner Alps; in the latter, they are often in continuity with the montane spruce forests of 42.22. The spruces are often stunted or columnar; they are accompanied by an undergrowth of decidedly sub-alpine affinities. Picea abies forests of the lower sub-alpine level of the Carpathians.

42.22 - Inner range montane spruce forests. Piceetum montanum.

Picea abies forests of the montane level of the inner Alps, characteristic of regions climatically unfavourable to both beech and fir. Analogous Picea abies forests of the montane and collinar levels of the inner basin of the Slovakian Carpathians subjected to a climate of high continentality.
42.23 - Hercynian sub-alpine spruce forests
Sub-alpine Picea abies forests of high Hercynian ranges 21.
42.25 - Peri-Alpine spruce forests
Spontaneous Picea abies formations occupying outlying altitudinal or edaphic enclaves within the range of more predominant vegetation types of the montane levels of the outer Alps, the Carpathians, the Dinarides, the Jura, the Hercynian ranges, the subalpine levels of the Jura, the western Hercynian ranges and the Dinarides

2) Plants: Picea abies, Vaccinium spp.

9530 * (Sub-)Mediterranean pine forests with endemic black pines

PAL.CLASS.: 42.61 to 42.66

1) Forests of the montane-Mediterranean level, on dolomitic substrate (high tolerance to magnesium), dominated by pines of the Pinus nigra group, often with a dense structure.

Sub-types :

42.61 - Alpino-Apennine Pinus nigra forests - Pinus nigra s.s. forests of the eastern Italian, Austrian and ***Slovenian Alps*** and of the Apennines;
42.62 - Western Balkanic Pinus nigra forests - Pinus nigra ssp. nigra of the Dinarides, the Pelagonides; Pinus dalmatica forests of the Dalmatian coastal areas;
42.63 - Salzmann's pine forests - Pinus salzmannii forests of Spain (Pyrenees, northern Iberian Range, sierra de Gredos, serrania de Cuenca, Maestrazgo, sierras de Cazorla, Segura and Alcaraz, calcareous periphery of the Sierra Nevada) and the Causses;
42.64 - Corsican laricio pine forests - Pinus laricio forests of the mountains of Corsica (1000 to 1800 m) on granitic soils;
42.65 - Calabrian laricio pine forests - Pinus laricio var. calabrica forests of the Sila (Sila Greca, Sila Grande, Sila Piccola), the Aspromonte and Etna;
42.66 - Pallas's pine forests - montane forests of Pinus pallasiana of Greece and the Balkan peninsula.

2) Plants: Pinus laricio, Pinus nigra, Pinus pallasiana, Pinus salzmannii.
Animals: Sitta whiteheadi.