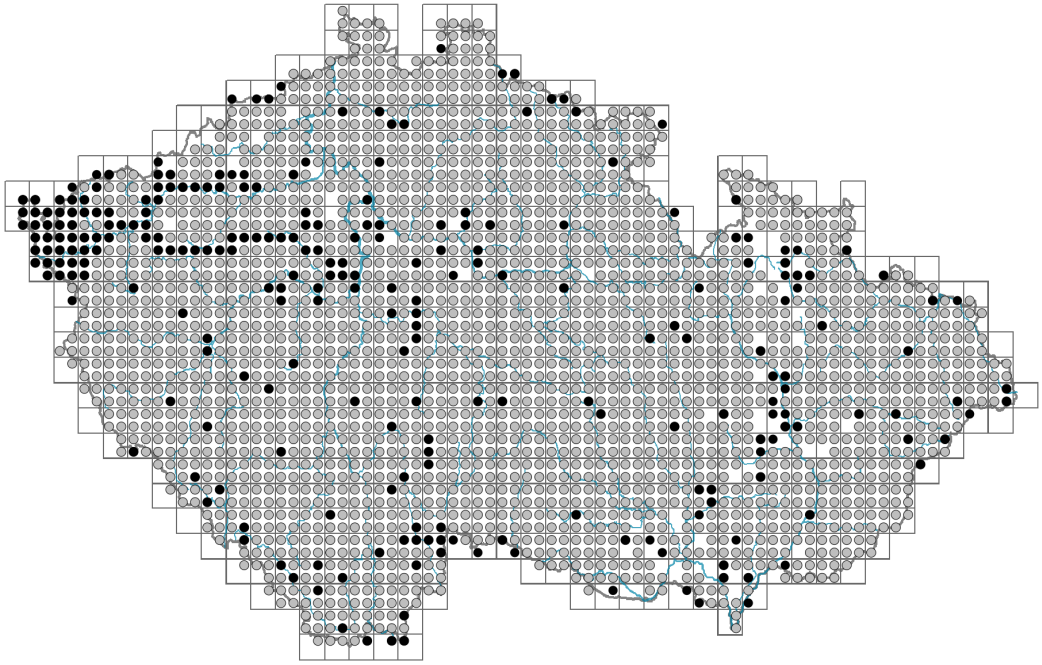
Pinus sylvestris

Distribution



Map info

revised records

unrevised records

On the map are not visualized records without the coordinates and records marked as incorrect or doubtful.

Habitus and growth type

Height [m]: **5–40**
Growth form: **tree**
Life form: **macrophanerophyte**
Life strategy: **C – competitor**
Life strategy (Pierce method based on leaf traits): **S**
Life strategy (Pierce method, C-score): **5.4 %**
Life strategy (Pierce method, S-score): **94.6 %**
Life strategy (Pierce method, R-score): **0 %**

Leaf

Leaf presence and metamorphosis: **leaves present, not modified**
Leaf arrangement (phyllotaxis): **opposite**
Leaf shape: **simple – entire**
Stipules: **absent**
Petiole: **absent**
Leaf life span: **evergreen**
Leaf deciduousness in woody plants: **evergreen**
Leaf anatomy: **scleromorphic**
Functional leaf type in woody plants: **needle-like**

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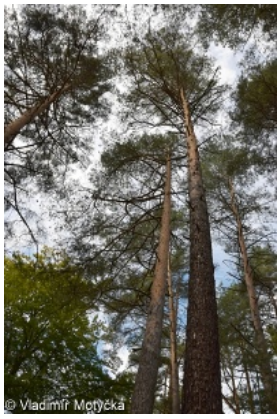
Flower



Flowering period [month]: **May**
Flowering phase: **6 Cornus sanguinea-Melica uniflora (start of early summer)**
Dicliny: **monoecious, gynodioecious, androdioecious**
Generative reproduction type: **allogamy, facultative allogamy**
Pollination syndrome: **wind-pollination**

Fruit, seed and dispersal

Reproduction type: **only by seed/spores**
Dispersal unit (diaspore): **seed, fruit, infrutescence or its part**
Dispersal strategy: **Epilobium (mainly anemochory and autochory)**
Myrmecochory: **non-myrmecochorous (b)**

Belowground organs and clonality

Bud bank

Number of buds per shoot at the soil surface (root buds excluded): **0**
Number of buds per shoot at a depth of 0–10 cm (root buds excluded): **0**
Number of buds per shoot at a depth greater than 10 cm (root buds excluded): **0**
Size of the belowground bud bank (root buds excluded): **0**
Number of buds per shoot at the soil surface (root buds included): **0**
Number of buds per shoot at a depth of 0–10 cm (root buds included): **0**
Number of buds per shoot at a depth greater than 10 cm (root buds included): **0**
Size of the belowground bud bank (root buds included): **0**

Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**
Carnivory: **non-carnivorous**
Symbiotic nitrogen fixation: **no nitrogen-fixing symbionts**

Karyology

Chromosome number (2n): **24**
Ploidy level (x): **2**
2C genome size [Mbp]: **40961.05**
1Cx monoploid genome size [Mbp]: **20480.52**
Genomic GC content: **41.8 %**

Taxon origin

Origin in the Czech Republic: **native**

Ecological indicator values

Ellenberg-type indicator values

Light indicator value: **6 – transition between values 5 and 7; rarely at less than 20% of diffuse radiation incident in an open area**

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Temperature indicator value: **5x – moderate heat indicator, occurring from lowland to montane belt, mainly in submontane-temperate areas (generalist)**
Moisture indicator value: **5x – indicator of fresh soils, focus on soils of average moisture, missing on wet and on soils that frequently dry out (generalist)**
Reaction indicator value: **5x – indicator of moderate acidity, occurring rarely in strongly acidic as well as in neutral to alkaline conditions (generalist)**
Nutrient indicator value: **2x – transition between values 1 and 3 (generalist)**
Salinity indicator value: **0 – not salt tolerant, glycophyte**

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-1.95**
Herb layer disturbance frequency indicator value: **-0.93**
Whole-community disturbance severity indicator value: **0.22**
Herb layer disturbance severity indicator value: **0.06**
Whole-community structure based disturbance indicator value: **0.09**
Herb layer structure-based disturbance indicator value: **0.1**

Habitat and sociology

Occurrence in habitats

1 Vegetation of cliffs, screes and walls

1A Calcareous cliffs: **1 – rare occurrence**
1B Siliceous cliffs and block fields: **1 – rare occurrence**

5 Vegetation of springs and mires

5F Transitional mires: **1 – rare occurrence**
5G Raised bogs: **1 – rare occurrence**
5H Wet peat soils and bog hollows: **1 – rare occurrence**

7 Acidophilous grasslands

7B Submontane Nardus grasslands: **1 – rare occurrence**

8 Dry grasslands

8A Hercynian dry grasslands on rock outcrops: **1 – rare occurrence**
8B Submediterranean dry grasslands on rock outcrops: **1 – rare occurrence**
8C Narrow-leaved sub-continental steppes: **1 – rare occurrence**
8D Broad-leaved dry grasslands: **1 – rare occurrence**
8E Acidophilous dry grasslands: **1 – rare occurrence**
8F Thermophilous forest fringe vegetation: **1 – rare occurrence**

9 Sand grasslands and rock-outcrop vegetation

9B Open vegetation of acidic sands: **1 – rare occurrence**
9C Festuca grasslands on acidic sands: **1 – rare occurrence**

11 Heathlands and scrub

11A Dry lowland to subalpine heathlands: **1 – rare occurrence**
11I Willow carrs: **1 – rare occurrence**
11L Tall mesic and xeric shrub: **1 – rare occurrence**
11N Low xeric scrub: **1 – rare occurrence**
11R Scrub and pioneer woodland of forests clearings: **1 – rare occurrence**

12 Forests

12A Alder carrs: **1 – rare occurrence**
12B Alluvial forests: **1 – rare occurrence**

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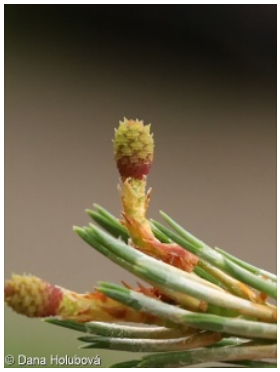
12C Oak-hornbeam forests: **2 – optimum**
12D Ravine forests: **1 – rare occurrence**
12E Herb-rich beech forests: **1 – rare occurrence**
12F Limestone beech forests: **2 – optimum**
12G Acidophilous beech forests: **2 – optimum**
12H Peri-Alpidic basiphilous thermophilous oak forests: **2 – optimum**
12I Sub-continental thermophilous oak forests: **2 – optimum**
12J Acidophilous thermophilous oak forests: **2 – optimum**
12K Acidophilous oak forests: **4 – constant dominant**
12L Boreo-continental pine forests: **4 – constant dominant**
12O Peri-Alpidic pine forests: **4 – constant dominant**
12P Peatland pine forests: **4 – constant dominant**
12Q Peatland birch forests: **2 – optimum**
12R Acidophilous spruce forests: **1 – rare occurrence**
12T Robinia pseudacacia plantations: **1 – rare occurrence**
12V Spruce plantations: **2 – optimum**
12W Pine and larch plantations: **4 – constant dominant**



13 Anthropogenic vegetation

13F Herbaceous vegetation of forests clearings and Rubus scrub: **1 – rare occurrence**

Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **2.1 – taxon occurring both in the forest and open vegetation**
Affinity to the forest environment in Mesophyticum and Oreophyticum: **2.1 – taxon occurring both in the forest and open vegetation**

Diagnostic taxon

Diagnostic taxon of classes: **LD *Quercetea robori-petraeae***, **LE *Erico-Pinetea***, **LF *Vaccinio-Piceetea***
Diagnostic taxon of alliances: **LDA *Quercion roboris***, **LEA *Erico carneae-Pinion***, **LFA *Festuco-Pinion sylvestris***, **LFB *Dicrano-Pinion sylvestris***, **LFD *Vaccinio uliginosi-Pinion sylvestris***

Diagnostic taxon of associations: **LDA03 *Vaccinio vitis-idaeae-Quercetum roboris***, **LEA01 *Thlaspio montani-Pinetum sylvestris***, **LFA01 *Festuco-Pinetum sylvestris***, **LFB01 *Cladino-Pinetum sylvestris***, **LFB02 *Vaccinio myrtilli-Pinetum sylvestris***, **LFB03 *Hieracio pallidi-Pinetum sylvestris***, **LFB04 *Asplenio cuneifolii-Pinetum sylvestris***, **LFD02 *Vaccinio uliginosi-Pinetum sylvestris***, **RCA04 *Sphagno-Pinetum sylvestris***, **THC04 *Asplenio cuneifolii-Seslerietum caeruleae***

Constant taxon

Constant taxon of classes: **LE *Erico-Pinetea***, **LF *Vaccinio-Piceetea***
Constant taxon of alliances: **LEA *Erico carneae-Pinion***, **LFA *Festuco-Pinion sylvestris***, **LFB *Dicrano-Pinion sylvestris***

Constant taxon of associations: **LDA03 *Vaccinio vitis-idaeae-Quercetum roboris***, **LEA01 *Thlaspio montani-Pinetum sylvestris***, **LFA01 *Festuco-Pinetum sylvestris***, **LFB01 *Cladino-Pinetum sylvestris***, **LFB02 *Vaccinio myrtilli-Pinetum sylvestris***, **LFB03 *Hieracio pallidi-Pinetum sylvestris***, **LFB04 *Asplenio cuneifolii-Pinetum sylvestris***, **LFD01 *Vaccinio uliginosi-Betuletum pubescentis***, **LFD02 *Vaccinio uliginosi-Pinetum sylvestris***, **RCA04 *Sphagno-Pinetum sylvestris***, **THC04 *Asplenio cuneifolii-Seslerietum caeruleae***

Dominant taxon

Dominant taxon of associations: **LDA01 *Luzulo luzuloidis-Quercetum petraeae***,

LDA02 *Viscario vulgaris-Quercetum petraeae*, **LDA03 *Vaccinio vitis-idaeae-Quercetum roboris***, **LEA01 *Thlaspio montani-Pinetum sylvestris***, **LFA01 *Festuco-Pinetum sylvestris***, **LFB01 *Cladino-Pinetum sylvestris***, **LFB02 *Vaccinio myrtilli-Pinetum sylvestris***, **LFB03 *Hieracio pallidi-Pinetum sylvestris***, **LFB04 *Asplenio cuneifolii-Pinetum sylvestris***, **LFD02 *Vaccinio uliginosi-Pinetum sylvestris***, **RCA04 *Sphagno-Pinetum sylvestris***

Ecological specialization indices

Ecological specialization index for all vegetation types: **3.6**
Ecological specialization index for non-forest vegetation: **2.9**
Ecological specialization index for forest vegetation: **3.7**

Colonization ability

Index of colonization success (ICS): **9**
Index of colonization potential (ICP): **8**
Optimum successional age [years]: **15**

Distribution and frequency

Floristic zone: **boreal, northern temperate, southern temperate, submeridional**
Floristic region: **Europe, Asia**
Continentality degree: **6**
Distribution range extension along the continentality gradient: **5**
Elevational belt in the Czech Republic: **lowlands, colline belt, submontane belt (montane belt)**
Expansive taxon in the region: **Bohemian Thermophyticum, Bohemian Moravian Mesophyticum, Pannonian Thermophyticum, Carpathian Mesophyticum**
Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: 666
taxon.data.freq_in_quad: 2423

Commonness in vegetation plots from the Czech Republic

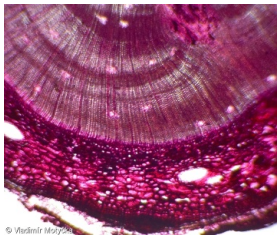
Occurrence frequency in vegetation plots: **2.7 %**
Occurrence frequency in vegetation plots with a cover above 5%: **62.1 %**
Occurrence frequency in vegetation plots with a cover above 25%: **44.9 %**
Occurrence frequency in vegetation plots with a cover above 50%: **20.4 %**
Mean percentage cover in vegetation plots: **27.3 %**
Maximum percentage cover in vegetation plots: **99 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **39**
Number of narrow habitats in which the taxon has its optimum: **13**
Number of broad habitats in which the taxon occurs: **8**
Number of broad habitats in which the taxon has its optimum: **1**

Threats and protection

Red List 2017 (national categories): **taxon is not on the Red List**
Red List 2017 (IUCN categories): **LC(NA) – least concern (taxon is not on the Red List)**
Legal protection: **not protected by law**



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