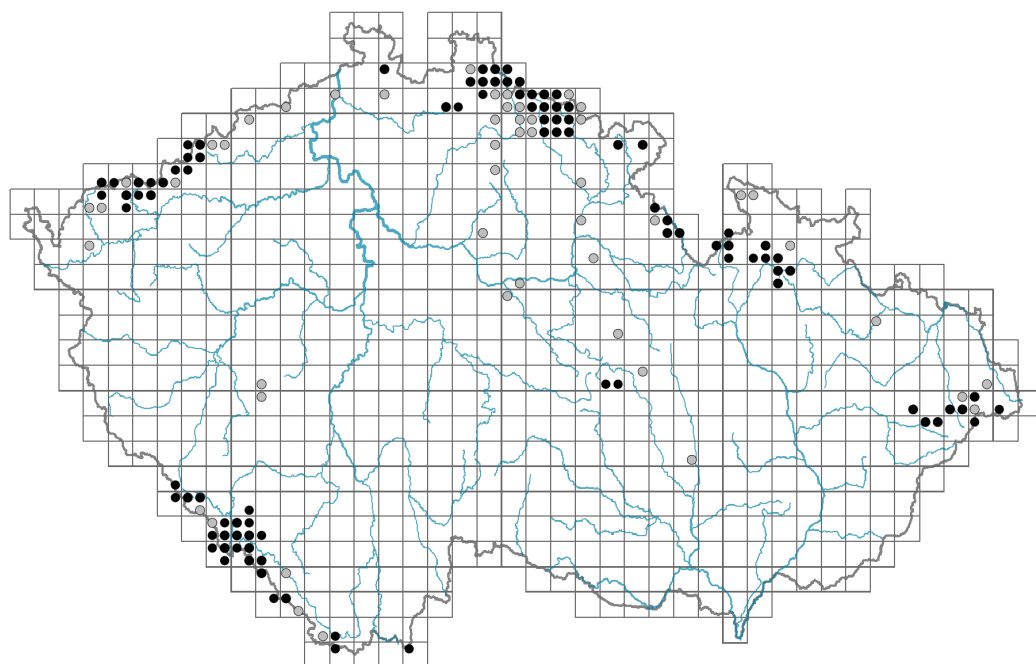


# *Pinus mugo*

## Distribution



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### 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]: **0.3-3**

Growth form: **shrub**

Life form: **nanophanerophyte**

Life strategy: **C - competitor**

Life strategy (Pierce method based on leaf traits): **S**

Life strategy (Pierce method, C-score): **1.2 %**

Life strategy (Pierce method, S-score): **98.8 %**

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**

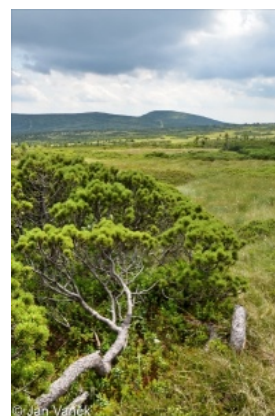
Functional leaf type in woody plants: **needle-like**



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## Flower

Flowering period [month]: **June-July**

Flowering phase: **6 Cornus sanguinea-Melica uniflora (start of early summer)**

Dicliny: **monoecious**

Generative reproduction type: **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)**

## 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]: **37474.54**

1Cx monoploid genome size [Mbp]: **18737.27**

Genomic GC content: **41 %**

## Taxon origin

Origin in the Czech Republic: **native**

## Ecological indicator values

Ellenberg-type indicator values

Light indicator value: **8 - light plant, only exceptionally occurring at less than 40% of diffuse radiation incident in an open area**

Temperature indicator value: **3 - cool indicator, occurring mainly in subalpine areas**

Moisture indicator value: **6x - transition between values 5 and 7 (generalist)**

Reaction indicator value: **4x - transition between values 3 and 5 (generalist)**

Nutrient indicator value: **3 - occurring at nutrient-poor sites more frequently than at average sites and exceptionally at rich sites**

Salinity indicator value: **0 - not salt tolerant, glycophyte**

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-1.84**

Herb layer disturbance frequency indicator value: **-1.76**

Whole-community disturbance severity indicator value: **0.07**

Herb layer disturbance severity indicator value: **0.09**



Whole-community structure based disturbance indicator value: **0.18**

Herb layer structure-based disturbance indicator value: **0.2**

## Habitat and sociology

### Occurrence in habitats

1 Vegetation of cliffs, screes and walls

1B Siliceous cliffs and block fields: **1 - rare occurrence**

2 Alpine and subalpine grasslands

2A Alpine grasslands on siliceous bedrock: **2 - optimum**

2B Subalpine tall-forb and tall-grass vegetation: **2 - optimum**

5 Vegetation of springs and mires

5E Acidic moss-rich fens and peatland meadows: **1 - rare occurrence**

5F Transitional mires: **1 - rare occurrence**

5G Raised bogs: **3 - dominant**

6 Meadows and mesic pastures

6B Montane mesic meadows: **1 - rare occurrence**

7 Acidophilous grasslands

7A Subalpine and montane acidophilous grasslands: **2 - optimum**

11 Heathlands and scrub

11A Dry lowland to subalpine heathlands: **1 - rare occurrence**

11D Subalpine acidophilous *Pinus mugo* scrub: **4 - constant dominant**

11H Subalpine deciduous scrub: **1 - rare occurrence**

12 Forests

12P Peatland pine forests: **1 - rare occurrence**

12Q Peatland birch forests: **1 - rare occurrence**

12R Acidophilous spruce forests: **2 - optimum**

12S Basiphilous spruce forests: **1 - rare occurrence**

Affinity to the forest environment

Affinity to the forest environment in Mesophyticum and Oreophyticum: **2.2 - taxon occurring partly in the forest, but mainly in open vegetation**

Diagnostic taxon

Diagnostic taxon of classes: [KC \*Roso pendulinae\*-\*Pinetea mugo\*](#), [RC \*Oxycocco-Sphagnetea\*](#)

Diagnostic taxon of alliances: [ADC \*Salicion silesiaca\*](#), [KCA \*Pinion mugo\*](#), [RCA \*Sphagnion magellanicum\*](#)

Diagnostic taxon of associations: [ADC01 \*Salici silesiaca\*-\*Betuletum carpaticum\*](#), [KCA01 \*Dryopterido dilatatae\*-\*Pinetum mugo\*](#), [KCA02 \*Adenostylo alliariae\*-\*Pinetum mugo\*](#), [RCA03 \*Vaccinio uliginosi\*-\*Pinetum mugo\*](#)

Constant taxon

Constant taxon of classes: [KC \*Roso pendulinae\*-\*Pinetea mugo\*](#)

Constant taxon of alliances: [KCA \*Pinion mugo\*](#)

Constant taxon of associations: [KCA01 \*Dryopterido dilatatae\*-\*Pinetum mugo\*](#), [KCA02 \*Adenostylo alliariae\*-\*Pinetum mugo\*](#), [RCA03 \*Vaccinio uliginosi\*-\*Pinetum mugo\*](#)

Dominant taxon

Dominant taxon of associations: [KCA01 \*Dryopterido dilatatae\*-\*Pinetum mugo\*](#), [KCA02 \*Adenostylo alliariae\*-\*Pinetum mugo\*](#), [RCA03 \*Vaccinio uliginosi\*-\*Pinetum mugo\*](#)



***mugo***

Ecological specialization indices

Ecological specialization index for all vegetation types: **6**

Ecological specialization index for non-forest vegetation: **6.1**

Ecological specialization index for forest vegetation: **6.2**

Colonization ability

Index of colonization success (ICS): **1**

Index of colonization potential (ICP): **1**

**Distribution and frequency**

Floristic zone: **northern temperate, southern temperate, submeridional**

Floristic region: **Europe**

Continental degree: **4**

Distribution range extension along the continentality gradient: **2**

Elevational belt in the Czech Republic: **montane belt, subalpine belt**

Expansive taxon in the region: **Bohemian Moravian Oreophyticum**

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **129**

taxon.data.freq\_in\_quad: **205**

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **0.3 %**

Occurrence frequency in vegetation plots with a cover above 5%: **78.6 %**

Occurrence frequency in vegetation plots with a cover above 25%: **68.4 %**

Occurrence frequency in vegetation plots with a cover above 50%: **48 %**

Mean percentage cover in vegetation plots: **45.1 %**

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: **15**

Number of narrow habitats in which the taxon has its optimum: **6**

Number of broad habitats in which the taxon occurs: **7**

Number of broad habitats in which the taxon has its optimum: **5**

**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**