# *Maianthemum bifolium*

## 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]: **0.05–0.25**
Growth form: **clonal herb**
Life form: **geophyte**
Life strategy: **S – stress-tolerator**
Life strategy (Pierce method based on leaf traits): **CSR**
Life strategy (Pierce method, C-score): **28.2 %**
Life strategy (Pierce method, S-score): **28.1 %**
Life strategy (Pierce method, R-score): **43.7 %**

### Leaf

Leaf presence and metamorphosis: **leaves present, not modified**
Leaf arrangement (phyllotaxis): **alternate**
Leaf shape: **simple – entire**
Stipules: **absent**
Petiole: **present**
Leaf life span: **summer green**
Leaf anatomy: **scleromorphic, mesomorphic**

### Flower

Flowering period [month]: **April–May**

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Flowering phase: **5 Sorbus aucuparia-Galium odoratum (end of mid-spring)**
Flower colour: **white**
Flower symmetry: **actinomorphic**
Perianth type: **homochlamydeous**
Perianth fusion: **free**
Inflorescence type: **racemus**
Dicliny: **synoecious**
Generative reproduction type: **facultative allogamy**
Pollination syndrome: **insect-pollination, selfing**




## Fruit, seed and dispersal

Fruit type: **fleshy fruit – berry**
Fruit colour: **red**
Reproduction type: **by seed/spores and vegetatively**
Dispersal unit (diaspore): **seed, fruit, infrutescence or its part**
Dispersal strategy: **Cornus (mainly autochory and endozoochory)**
Myrmecochory: **non-myrmecochorous (b)**




## Belowground organs and clonality

Shoot metamorphosis: **stolon-like rhizome**
Storage organ: **stolon-like rhizome**
Type of clonal growth organ: **hypogeogenous rhizome**
Freely dispersible organs of clonal growth: **absent**
Shoot life span (cyclicity): **dicyclic or polycyclic shoots prevailing**
Branching type of stem-derived organs of clonal growth: **sympodial**
Primary root: **absent**
Persistence of the clonal growth organ [year]: **4**
Number of clonal offspring: **1.9**
Lateral spreading distance by clonal growth [m]: **0.13**
Clonal index: **4**




### Bud bank

Number of buds per shoot at the soil surface (root buds excluded): **4**
Number of buds per shoot at a depth of 0–10 cm (root buds excluded): **15**
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): **19**
Depth of the belowground bud bank (root buds exluded) [cm]: **4**
Number of buds per shoot at the soil surface (root buds included): **4**
Number of buds per shoot at a depth of 0–10 cm (root buds included): **15**
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): **19**
Depth of the belowground bud bank (root buds included) [cm]: **4**

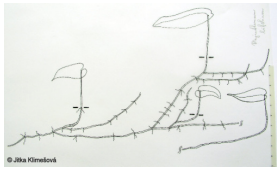




## Trophic mode

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





## Karyology

Chromosome number (2n): **36 (38, 42, 54)**
Ploidy level (x): **4**
2C genome size [Mbp]: **25009.71**
1Cx monoploid genome size [Mbp]: **6252.43**
Genomic GC content: **42 %**

## Taxon origin

Origin in the Czech Republic: **native**

## Ecological indicator values

### Ellenberg-type indicator values

Light indicator value: **4 – transition between values 3 and 5**
Temperature indicator value: **5x – moderate heat indicator, occurring from lowland to montane belt, mainly in submontane-temperate areas (generalist)**
Moisture indicator value: **5 – indicator of fresh soils, focus on soils of average moisture, missing on wet and on soils that frequently dry out**
Reaction indicator value: **4 – transition between values 3 and 5**
Nutrient indicator value: **4 – transition between values 3 and 5**
Salinity indicator value: **0 – not salt tolerant, glycophyte**

### Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-1.96**
Herb layer disturbance frequency indicator value: **-0.7**
Whole-community disturbance severity indicator value: **0.25**
Herb layer disturbance severity indicator value: **0.08**
Whole-community structure based disturbance indicator value: **0.08**
Herb layer structure-based disturbance indicator value: **0.16**

## Habitat and sociology

### Occurrence in habitats

#### 2 Alpine and subalpine grasslands

2B Subalpine tall-forb and tall-grass vegetation: **1 – rare occurrence**

#### 5 Vegetation of springs and mires

5B Lowland to montane soft-water springs: **1 – rare occurrence**
5C Alpine and subalpine soft-water springs: **1 – rare occurrence**
5D Calcareous fens: **1 – rare occurrence**
5E Acidic moss-rich fens and peatland meadows: **1 – rare occurrence**
5F Transitional mires: **1 – rare occurrence**
5G Raised bogs: **1 – rare occurrence**

#### 6 Meadows and mesic pastures

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

#### 7 Acidophilous grasslands

7A Subalpine and montane acidophilous grasslands: **1 – rare occurrence**
7B Submontane Nardus grasslands: **1 – rare occurrence**

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## 8 Dry grasslands

8F Thermophilous forest fringe vegetation: **1 – rare occurrence**

## 11 Heathlands and scrub

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

11H Subalpine deciduous 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: **2 – optimum**

12C Oak-hornbeam forests: **2 – optimum**

12D Ravine forests: **2 – optimum**

12E Herb-rich beech forests: **2 – optimum**

12F Limestone beech forests: **2 – optimum**

12G Acidophilous beech forests: **2 – optimum**

12I Sub-continental thermophilous oak forests: **1 – rare occurrence**

12K Acidophilous oak forests: **2 – optimum**

12L Boreo-continental pine forests: **1 – rare occurrence**

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

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

12S Basiphilous spruce forests: **2 – optimum**

12U Plantations of broad-leaved non-native trees: **1 – rare occurrence**

12V Spruce plantations: **2 – optimum**

12W Pine and larch plantations: **1 – rare occurrence**

## 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: **1.1 – taxon occurring mainly in the closed forest**

Affinity to the forest environment in Mesophyticum and Oreophyticum: **1.1 – taxon occurring mainly in the closed forest**

## Diagnostic taxon

Diagnostic taxon of classes: **LB *Carpino-Fagetea***

Diagnostic taxon of alliances: **LBB *Carpinion betuli***, **LBE *Luzulo-Fagion sylvaticae***

Diagnostic taxon of associations: **LBB03 *Carici pilosae-Carpinetum betuli***, **LBE02 *Calamagrostio villosae-Fagetum sylvaticae***

## Constant taxon

Constant taxon of alliances: **LBB *Carpinion betuli***

Constant taxon of associations: **LBB03 *Carici pilosae-Carpinetum betuli***, **LBC03 *Carici pilosae-Fagetum sylvaticae***, **LBC04 *Athyrio distentifolii-Fagetum sylvaticae***, **LBE02 *Calamagrostio villosae-Fagetum sylvaticae***, **LBE03 *Luzulo-Abietetum albae***

## Ecological specialization indices

Ecological specialization index for all vegetation types: **4.9**

Ecological specialization index for non-forest vegetation: **3.6**

Ecological specialization index for forest vegetation: **5**

## Colonization ability

Index of colonization success (ICS): **5**

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Index of colonization potential (ICP): **2**
Optimum successional age [years]: **4**

## 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 (subalpine belt)**
Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: 650
taxon.data.freq_in_quad: 2171

### Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **3.8 %**
Occurrence frequency in vegetation plots with a cover above 5%: **5.7 %**
Occurrence frequency in vegetation plots with a cover above 25%: **0.5 %**
Occurrence frequency in vegetation plots with a cover above 50%: **0 %**
Mean percentage cover in vegetation plots: **2.8 %**
Maximum percentage cover in vegetation plots: **38 %**

### Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **31**
Number of narrow habitats in which the taxon has its optimum: **10**
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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