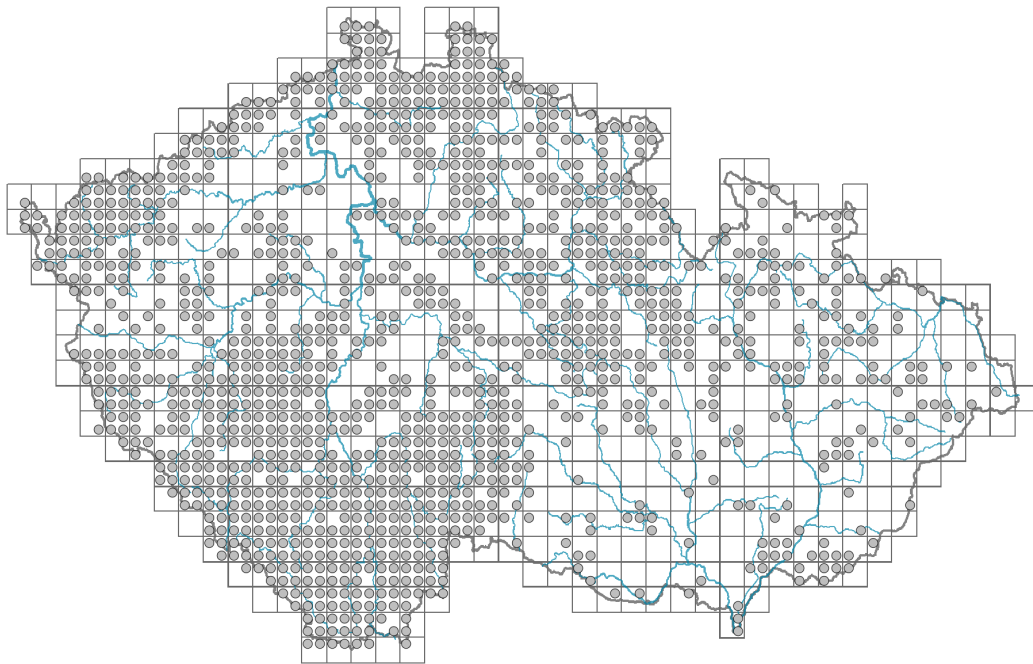


# *Molinia caerulea*

## 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]: **0.15-1.5**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

Life strategy: **CS - competitor/stress-tolerator**

## Leaf

Leaf presence and metamorphosis: **leaves present, not modified**

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **simple - entire**

Stipules: **absent**

Petiole: **absent**

Leaf life span: **summer green**

Leaf anatomy: **scleromorphic, helomorphic**

## Flower

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

Flowering phase: **8 Clematis vitalba-Galium sylvaticum (mid-summer)**

Flower colour: **green**

Perianth type: **reduced**

Perianth fusion: **reduced**



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© Dana Michalčová

Inflorescence type: **panicula e spiculis composita**

Dicliny: **synoecious**

Generative reproduction type: **alogamy self-incompatibility**

Pollination syndrome: **wind-pollination**

## Fruit, seed and dispersal

Fruit type: **dry fruit - caryopsis**

Fruit colour: **brown**

Reproduction type: **mostly by seed/spores, rarely vegetatively**

Dispersal unit (diaspore): **fruit, infrutescence or its part**

Dispersal strategy: **Allium (mainly autochory)**

Myrmecochory: **non-myrmecochorous (a)**

## Belowground organs and clonality

Shoot metamorphosis: **rhizome, shoot tuber**

Storage organ: **rhizome, shoot tuber, tuft**

Type of clonal growth organ: **hypogeogenous rhizome**

Freely dispersible organs of clonal growth: **absent**

Shoot life span (cyclicity): **monocyclic shoots prevailing**

Branching type of stem-derived organs of clonal growth: **sympodial**

Primary root: **absent**

Persistence of the clonal growth organ [year]: **3.7**

Number of clonal offspring: **1.8**

Lateral spreading distance by clonal growth [m]: **0.02**

Clonal index: **3**

## 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): **11**

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): **15**

Depth of the belowground bud bank (root buds excluded) [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): **11**

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): **15**

Depth of the belowground bud bank (root buds included) [cm]: **4**

## Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

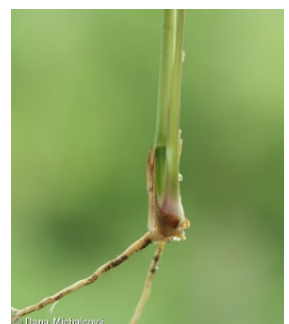
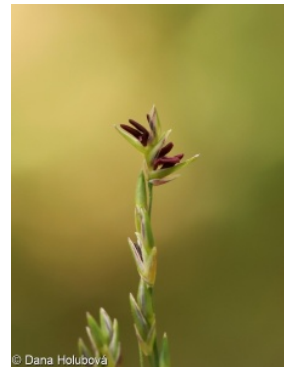
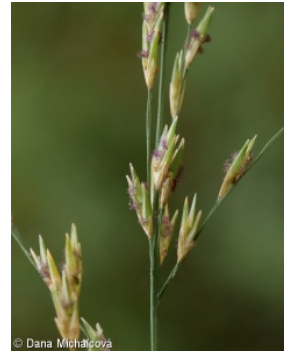
Carnivory: **non-carnivorous**

Symbiotic nitrogen fixation: **no nitrogen-fixing symbionts**

## Karyology

Chromosome number (2n): **36 (18, 54)**

Ploidy level (x): **4 (2, 6)**



2C genome size [Mbp]: **2977.18**  
 1Cx monoploid genome size [Mbp]: **744.3**  
 Genomic GC content: **47.1 %**

## 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**

Temperature indicator value: **5 - moderate heat indicator, occurring from lowland to montane belt, mainly in submontane-temperate areas**

Moisture indicator value: **7 - humidity indicator, focus on well moistened, but not wet soils**

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: **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**

## 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**

3 Aquatic vegetation

3C Macrophytic vegetation of oligotrophic lakes and pools: **1 - rare occurrence**

4 Wetland and riverine herbaceous vegetation

4A Reed-beds of eutrophic still waters: **1 - rare occurrence**

4G Tall-sedge beds: **1 - rare occurrence**

5 Vegetation of springs and mires

5C Alpine and subalpine soft-water springs: **2 - optimum**

5D Calcareous fens: **3 - dominant**

5E Acidic moss-rich fens and peatland meadows: **2 - optimum**

5F Transitional mires: **2 - optimum**

5G Raised bogs: **2 - optimum**

5H Wet peat soils and bog hollows: **2 - optimum**

6 Meadows and mesic pastures

6A Mesic Arrhenatherum meadows: **1 - rare occurrence**

6F Intermittently wet Molinia meadows: **3 - dominant**

7 Acidophilous grasslands

7A Subalpine and montane acidophilous grasslands: **1 - rare occurrence**



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

8 Dry grasslands

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

9 Sand grasslands and rock-outcrop vegetation

9B Open vegetation of acidic sands: **1 - rare occurrence**

11 Heathlands and scrub

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

11D Subalpine acidophilous *Pinus mugo* scrub: **1 - rare occurrence**

11H Subalpine deciduous scrub: **2 - optimum**

11I Willow carrs: **1 - rare occurrence**

11R Scrub and pioneer woodland of forests clearings: **1 - rare occurrence**

12 Forests

12A Alder carrs: **2 - optimum**

12K Acidophilous oak forests: **1 - rare occurrence**

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

12P Peatland pine forests: **2 - optimum**

12Q Peatland birch forests: **3 - dominant**

12R Acidophilous spruce forests: **1 - rare occurrence**

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

12V Spruce plantations: **1 - rare occurrence**

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: **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 alliances: [LFD \*Vaccinio uliginosi-Pinion sylvestris\*](#)

Diagnostic taxon of associations: [ACA02 \*Saxifrago paniculatae-Agrostietum alpinae\*](#), [ADA01 \*Sphagno compacti-Molinietum caeruleae\*](#), [LFD02 \*Vaccinio uliginosi-Pinetum sylvestris\*](#), [RAD02 \*Swertietum perennis\*](#), [RBC02 \*Drosero anglicae-Rhynchosporium albae\*](#), [RBC04 \*Bartsio alpinae-Caricetum nigrae\*](#), [RBD04 \*Polytricho communis-Molinietum caeruleae\*](#), [RCA04 \*Sphagno-Pinetum sylvestris\*](#)

Constant taxon

Constant taxon of classes: [AC \*Elyno-Seslerietea\*](#)

Constant taxon of alliances: [ACA \*Agrostion alpinae\*](#), [ADA \*Calamagrostion villosae\*](#)

Constant taxon of associations: [ACA01 \*Saxifrago oppositifoliae-Festucetum versicoloris\*](#), [ACA02 \*Saxifrago paniculatae-Agrostietum alpinae\*](#), [ADA01 \*Sphagno compacti-Molinietum caeruleae\*](#), [LFD02 \*Vaccinio uliginosi-Pinetum sylvestris\*](#), [LFD04 \*Vaccinio uliginosi-Piceetum abietis\*](#), [RAD02 \*Swertietum perennis\*](#), [RBC02 \*Drosero anglicae-Rhynchosporium albae\*](#), [RBC04 \*Bartsio alpinae-Caricetum nigrae\*](#), [RBD04 \*Polytricho communis-Molinietum caeruleae\*](#), [RCA04 \*Sphagno-Pinetum sylvestris\*](#), [RCC01 \*Trichophoro cespitosi-Sphagnetum compacti\*](#), [VDC02 \*Sphagno-Utricularietum ochroleuca\*](#)

Dominant taxon

Dominant taxon of associations: [ADA01 \*Sphagno compacti-Molinietum caeruleae\*](#),

[LFD02 \*Vaccinio uliginosi\*-Pinetum sylvestris](#), [LFD04 \*Vaccinio uliginosi\*-Piceetum abietis](#), [RBC02 \*Drosero anglicae\*-Rhynchosporietum albae](#), [RBC04 \*Bartsia alpinae\*-Caricetum nigrae](#), [RBD04 \*Polytricho communis\*-Molinietum caeruleae](#), [RCA01 \*Eriophoro vaginati\*-Sphagnetum recurvi](#), [RCA04 \*Sphagno\*-Pinetum sylvestris](#), [RCC01 \*Trichophoro cespitosi\*-Sphagnetum compacti](#), [TED01 \*Juncetum squarrosi\*](#), [TEF03 \*Festuco supinae\*-Vaccinietum myrtilli](#)

Colonization ability

Index of colonization success (ICS): **7**

Index of colonization potential (ICP): **4**

Optimum successional age [years]: **20**

## Distribution and frequency

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

Floristic region: **Europe**

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: **524**

taxon.data.freq\_in\_quad: **1292**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **33**

Number of narrow habitats in which the taxon has its optimum: **13**

Number of broad habitats in which the taxon occurs: **12**

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**