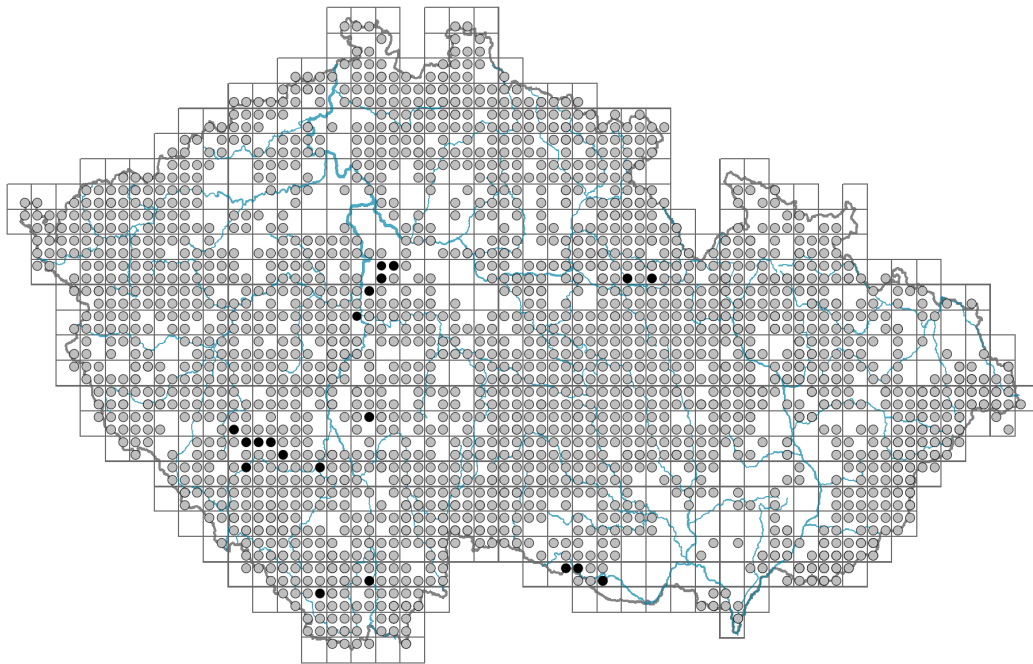


# *Viola canina*

## Distribution



### Map info

● revised records

○ unrevised records

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



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## Habitus and growth type

Height [m]: **0.05-0.3**

Growth form: **polycarpic perennial non-clonal herb**

Life form: **hemicryptophyte**

Life strategy (Pierce method based on leaf traits): **SR/CSR**

Life strategy (Pierce method, C-score): **12 %**

Life strategy (Pierce method, S-score): **41.6 %**

Life strategy (Pierce method, R-score): **46.4 %**

## Leaf

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

Leaf arrangement (phyllotaxis): **alternate**

Leaf shape: **simple - entire**

Stipules: **present**

Petiole: **present**

Leaf life span: **evergreen**

Leaf anatomy: **mesomorphic**

## Flower

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

Flower colour: **blue, blue-violet**

Flower symmetry: **zygomorphic**  
 Perianth type: **calyx and corolla**  
 Perianth fusion: **free**  
 Calyx fusion: **aposepalous**  
 Inflorescence type: **flores solitarii**  
 Generative reproduction type: **mixed mating**  
 Pollination syndrome: **insect-pollination, cleistogamy**

### Fruit, seed and dispersal

Fruit type: **dry fruit - capsule**  
 Fruit colour: **brown**  
 Reproduction type: **by seed/spores and vegetatively, mostly by seed/spores, rarely vegetatively**  
 Dispersal unit (diaspore): **seed**  
 Dispersal strategy: **Allium (mainly autochory)**  
 Myrmecochory: **myrmecochorous**

### Belowground organs and clonality

Shoot life span (cyclicality): **monocyclic shoots prevailing**  
 Branching type of stem-derived organs of clonal growth: **sympodial**  
 Primary root: **present**  
 Position of root buds: **primary root, lateral roots**  
 Role of root buds in life-history of a plant: **additive**

#### Bud bank

Number of buds per shoot at the soil surface (root buds excluded): **5**  
 Number of buds per shoot at a depth of 0–10 cm (root buds excluded): **10**  
 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): **5**  
 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): **8**  
 Size of the belowground bud bank (root buds included): **28**  
 Depth of the belowground bud bank (root buds included) [cm]: **7**

### Trophic mode

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

### Karyology

Chromosome number (2n): **40**  
 Ploidy level (x): **8**  
 2C genome size [Mbp]: **2192.14**  
 1Cx monoploid genome size [Mbp]: **274.02**



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Genomic GC content: **40.5 %**

## Taxon origin

Origin in the Czech Republic: **native**

## Ecological indicator values

Ellenberg-type indicator values

Light indicator value: **7 - half-light plant, mostly occurring at full light, but also in the shade up to about 30% of diffuse radiation incident in an open area**

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

Moisture indicator value: **4 - transition between values 3 and 5**

Reaction indicator value: **4 - transition between values 3 and 5**

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: **-0.7**

Herb layer disturbance frequency indicator value: **-0.45**

Whole-community disturbance severity indicator value: **0.27**

Herb layer disturbance severity indicator value: **0.3**

Whole-community structure based disturbance indicator value: **0.55**

Herb layer structure-based disturbance indicator value: **0.75**

## Habitat and sociology

Occurrence in habitats

1 Vegetation of cliffs, screes and walls

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

1D Mobile calcareous screes: **1 - rare occurrence**

5 Vegetation of springs and mires

5D Calcareous fens: **1 - rare occurrence**

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

6 Meadows and mesic pastures

6A Mesic Arrhenatherum meadows: **2 - optimum**

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

6C Pastures and park grasslands: **1 - rare occurrence**

6D Alluvial meadows of lowland rivers: **1 - rare occurrence**

6E Wet Cirsium meadows: **1 - rare occurrence**

6F Intermittently wet Molinia meadows: **2 - optimum**

6G Vegetation of wet disturbed soils: **1 - rare occurrence**

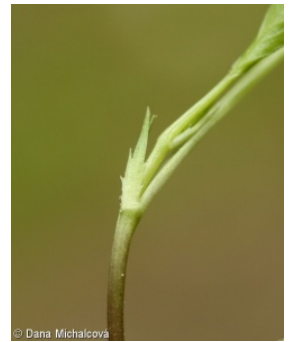
7 Acidophilous grasslands

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

7B Submontane Nardus grasslands: **2 - optimum**

8 Dry grasslands

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: **2 - optimum**  
8F Thermophilous forest fringe vegetation: **1 - rare occurrence**  
9 Sand grasslands and rock-outcrop vegetation  
9C Festuca grasslands on acidic sands: **1 - rare occurrence**  
11 Heathlands and scrub  
11A Dry lowland to subalpine heathlands: **2 - optimum**  
11H Subalpine deciduous scrub: **1 - rare occurrence**  
11L Tall mesic and xeric shrub: **1 - rare occurrence**  
12 Forests  
12C Oak-hornbeam forests: **1 - rare occurrence**  
12E Herb-rich beech forests: **1 - rare occurrence**  
12G Acidophilous beech forests: **1 - rare occurrence**  
12I Sub-continental thermophilous oak forests: **1 - rare occurrence**  
12K Acidophilous oak forests: **2 - optimum**  
12L Boreo-continental pine 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**

#### Diagnostic taxon

Diagnostic taxon of alliances: [TDD \*Molinion caeruleae\*](#), [TEC \*Violion caninae\*](#)

Diagnostic taxon of associations: [TDD02 \*Junco effusi-Molinietum caeruleae\*](#), [TEC01 \*Festuco capillatae-Nardetum strictae\*](#), [TEC02 \*Campanulo rotundifoliae-Dianthetum deltoidis\*](#)

#### Constant taxon

Constant taxon of alliances: [TEC \*Violion caninae\*](#)

Constant taxon of associations: [TDD02 \*Junco effusi-Molinietum caeruleae\*](#), [TEC01 \*Festuco capillatae-Nardetum strictae\*](#), [TEC02 \*Campanulo rotundifoliae-Dianthetum deltoidis\*](#)

#### Ecological specialization indices

Ecological specialization index for all vegetation types: **5.5**

Ecological specialization index for non-forest vegetation: **5.7**

Ecological specialization index for forest vegetation: **4.1**

#### Colonization ability

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

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

Optimum successional age [years]: **9**

#### Distribution and frequency

Distribution range extension along the continentality gradient: **5**

Elevational belt in the Czech Republic: **lowlands, colline belt, submontane belt**

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **614**

taxon.data.freq\_in\_quad: **1847**

## Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **1.3 %**

Occurrence frequency in vegetation plots with a cover above 5%: **5.1 %**

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: **2.7 %**

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: **7**

Number of broad habitats in which the taxon occurs: **9**

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

## Threats and protection

Legal protection: **not protected by law**