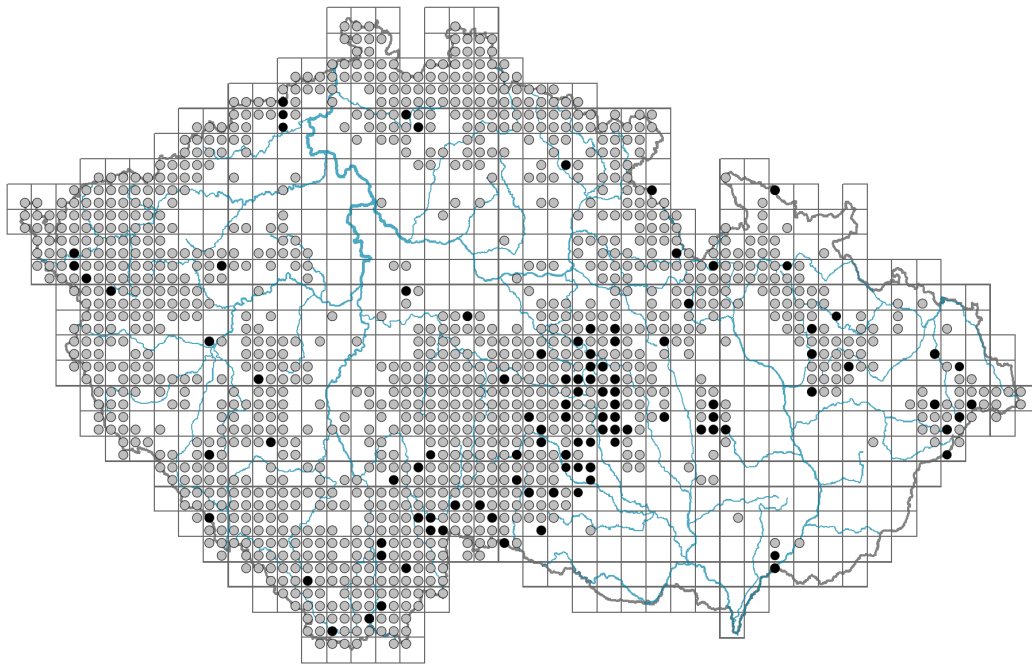


Viola palustris

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.



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Habitus and growth type

Height [m]: **0.05-0.15**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

Life strategy: **S - stress-tolerator**

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

Life strategy (Pierce method, C-score): **38.1 %**

Life strategy (Pierce method, S-score): **3 %**

Life strategy (Pierce method, R-score): **58.9 %**



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Leaf

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

Leaf arrangement (phyllotaxis): **rosulate**

Leaf shape: **simple - entire**

Stipules: **present**

Petiole: **present**

Leaf life span: **evergreen**

Leaf anatomy: **hygromorphic, helomorphic**



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Flower

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

Flowering phase: **3 Prunus avium-Ranunculus auricomus (end of early spring)**
 Flower colour: **violet**
 Flower symmetry: **zygomorphic**
 Perianth type: **calyx and corolla**
 Perianth fusion: **free**
 Calyx fusion: **aposepalous**
 Inflorescence type: **flores solitarii**
 Dicliny: **synoecious**
 Generative reproduction type: **mixed mating**
 Pollination syndrome: **insect-pollination, cleistogamy**



Fruit, seed and dispersal

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



Belowground organs and clonality

Shoot metamorphosis: **stolon**
 Storage organ: **stolon**
 Type of clonal growth organ: **epigeogenous rhizome**
 Freely dispersible organs of clonal growth: **absent**
 Shoot life span (cyclicality): **monocyclic shoots prevailing**
 Branching type of stem-derived organs of clonal growth: **monopodial**
 Primary root: **absent**
 Persistence of the clonal growth organ [year]: **2.6**
 Number of clonal offspring: **1.8**
 Lateral spreading distance by clonal growth [m]: **0.08**
 Clonal index: **3**

Bud bank

Number of buds per shoot at the soil surface (root buds excluded): **8**
 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): **19**
 Depth of the belowground bud bank (root buds excluded) [cm]: **3**
 Number of buds per shoot at the soil surface (root buds included): **8**
 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): **19**
 Depth of the belowground bud bank (root buds included) [cm]: **3**

Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**
 Carnivory: **non-carnivorous**

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

Karyology

Chromosome number (2n): **48**

Ploidy level (x): **8**

2C genome size [Mbp]: **3841.75**

1Cx monoploid genome size [Mbp]: **480.22**

Genomic GC content: **42.8 %**

Taxon origin

Origin in the Czech Republic: **native**

Ecological indicator values

Ellenberg-type indicator values

Light indicator value: **5x - semi-shade plant, only exceptionally occurring in full light, but usually at more than 10% of the diffuse radiation incident in an open area (generalist)**

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

Moisture indicator value: **9 - wetness indicator, focus on often soaked, poorly aerated soils**

Reaction indicator value: **3 - acidity indicator, occurring mainly in acidic conditions, exceptionally in neutral conditions**

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: **-1.06**

Herb layer disturbance frequency indicator value: **-0.67**

Whole-community disturbance severity indicator value: **0.18**

Herb layer disturbance severity indicator value: **0.2**

Whole-community structure based disturbance indicator value: **0.49**

Herb layer structure-based disturbance indicator value: **0.57**

Habitat and sociology

Occurrence in habitats

2 Alpine and subalpine grasslands

2A Alpine grasslands on siliceous bedrock: **1 - rare occurrence**

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

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**

4C Eutrophic vegetation of muddy substrata: **1 - rare occurrence**

4D Riverine reed vegetation: **1 - rare occurrence**

- 4E Reed vegetation of brooks: **1 - rare occurrence**
 4F Mesotrophic vegetation of muddy substrata: **1 - rare occurrence**
 4G Tall-sedge beds: **2 - optimum**
 4H Vegetation of low annual hygrophilous herbs: **1 - rare occurrence**
 4K Petasites fringes of montane brooks: **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: **2 - optimum**
 5D Calcareous fens: **1 - rare occurrence**
 5E Acidic moss-rich fens and peatland meadows: **2 - optimum**
 5F Transitional mires: **2 - optimum**
 5G Raised bogs: **1 - rare occurrence**
 5H Wet peat soils and bog hollows: **2 - optimum**
 6 Meadows and mesic pastures
 6B Montane mesic meadows: **1 - rare occurrence**
 6E Wet Cirsium meadows: **2 - optimum**
 6F Intermittently wet Molinia meadows: **1 - rare occurrence**
 6G Vegetation of wet disturbed soils: **1 - rare occurrence**
 7 Acidophilous grasslands
 7A Subalpine and montane acidophilous grasslands: **1 - rare occurrence**
 7B Submontane Nardus grasslands: **1 - rare occurrence**
 11 Heathlands and scrub
 11D Subalpine acidophilous Pinus mugo scrub: **1 - rare occurrence**
 11I Willow carrs: **2 - optimum**
 11J Willow galleries of loamy and sandy river banks: **1 - rare occurrence**
 12 Forests
 12A Alder carrs: **2 - optimum**
 12B Alluvial forests: **1 - rare occurrence**
 12P Peatland pine forests: **1 - rare occurrence**
 12Q Peatland birch forests: **1 - rare occurrence**
 12R Acidophilous spruce forests: **1 - rare occurrence**
 12S Basiphilous spruce forests: **1 - rare occurrence**
 12V Spruce plantations: **1 - rare occurrence**

Affinity to the forest environment

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: [LA *Alnetea glutinosae*](#), [RB *Scheuchzerio palustris-Caricetea nigrae*](#)

Diagnostic taxon of alliances: [LAA *Alnion glutinosae*](#), [RBB *Sphagno warnstorffii-Tomentypnion nitentis*](#), [RBC *Caricion canescenti-nigrae*](#), [RBD *Sphagno-Caricion canescentis*](#)

Diagnostic taxon of associations: [LAA01 *Thelypterido palustris-Alnetum glutinosae*](#), [LAB01 *Salicetum auritae*](#), [LBA02 *Piceo abietis-Alnetum glutinosae*](#), [RBB01 *Sphagno warnstorffii-Eriophoretum latifolii*](#), [RBB03 *Menyantho trifoliatae-Sphagnetum teretis*](#), [RBC01 *Caricetum nigrae*](#), [RBC03 *Agrostio caninae-Caricetum diandrae*](#), [RBD01 *Sphagno recurvi-Caricetum rostratae*](#), [RBD03 *Carici*](#)

echinatae-Sphagnetum*, TDF03 *Angelico sylvestris-Cirsietum palustris

Constant taxon

Constant taxon of classes: ***RB Scheuchzerio palustris-Caricetea nigrae***Constant taxon of alliances: ***LAA Alnion glutinosae*, *RBC Caricion canescenti-nigrae*, *RBD Sphagno-Caricion canescentis***Constant taxon of associations: ***LAA01 Thelypterido palustris-Alnetum glutinosae*, *LAB01 Salicetum auritae*, *LBA02 Piceo abietis-Alnetum glutinosae*, *RAD02 Swertietum perennis*, *RBB01 Sphagno warnstorffii-Eriophoretum latifolii*, *RBB02 Campylio stellati-Trichophoretum alpini*, *RBB03 Menyantho trifoliatae-Sphagnetum teretis*, *RBC01 Caricetum nigrae*, *RBC02 Drosero anglicae-Rhynchosporium albae*, *RBC03 Agrostio caninae-Caricetum diandrae*, *RBD01 Sphagno recurvi-Caricetum rostratae*, *RBD02 Sphagno recurvi-Caricetum lasiocarpae*, *RBD03 Carici echinatae-Sphagnetum*, *TDF03 Angelico sylvestris-Cirsietum palustris*, *TDF04 Crepido paludosae-Juncetum acutiflori***

Dominant taxon

Dominant taxon of associations: ***TDF04 Crepido paludosae-Juncetum acutiflori***

Ecological specialization indices

Ecological specialization index for all vegetation types: **5.3**Ecological specialization index for non-forest vegetation: **5.6**Ecological specialization index for forest vegetation: **5.3**

Colonization ability

Index of colonization success (ICS): **5**Index of colonization potential (ICP): **2**Optimum successional age [years]: **15****Distribution and frequency**Floristic zone: **arctic, boreal, northern temperate, southern temperate, submeridional, meridional**Floristic region: **Europe, Eastern America**Distribution range extension along the continentality gradient: **5**Elevational belt in the Czech Republic: **colline belt, submontane belt, montane belt, subalpine belt**Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **470**taxon.data.freq_in_quad: **1281**

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **3.4 %**Occurrence frequency in vegetation plots with a cover above 5%: **16.3 %**Occurrence frequency in vegetation plots with a cover above 25%: **2.7 %**Occurrence frequency in vegetation plots with a cover above 50%: **0.5 %**Mean percentage cover in vegetation plots: **4.8 %**Maximum percentage cover in vegetation plots: **88 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **34**Number of narrow habitats in which the taxon has its optimum: **8**Number of broad habitats in which the taxon occurs: **8**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**