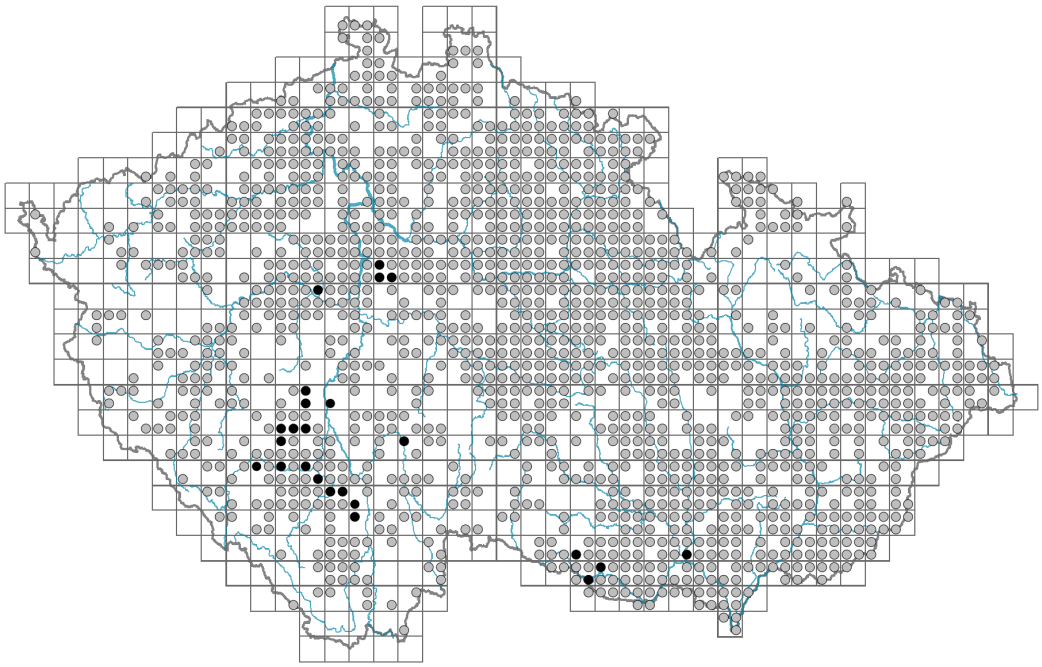
Viola odorata

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]: **0.1–0.2**
Growth form: **clonal herb**
Life form: **hemicryptophyte**
Life strategy: **CSR – competitor/stress-tolerator/ruderal**
Life strategy (Pierce method based on leaf traits): **CR/CSR**
Life strategy (Pierce method, C-score): **34.5 %**
Life strategy (Pierce method, S-score): **23 %**
Life strategy (Pierce method, R-score): **42.4 %**

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: **mesomorphic**

Flower

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

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Flowering phase: **2 Acer platanoides-Anemone nemorosa (start of early spring)**
Flower colour: **white, pink, 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: **by seed/spores and vegetatively**
Dispersal unit (diaspore): **seed**
Dispersal strategy: **Allium (mainly autochory)**
Myrmecochory: **myrmecochorous**

Belowground organs and clonality

Shoot metamorphosis: **stolon, rhizome**
Storage organ: **stolon, rhizome**
Type of clonal growth organ: **stolon**
Freely dispersible organs of clonal growth: **absent**
Shoot life span (cyclicity): **monocyclic shoots prevailing**
Branching type of stem-derived organs of clonal growth: **monopodial**
Primary root: **absent**
Persistence of the clonal growth organ [year]: **2.5**
Number of clonal offspring: **3.3**
Lateral spreading distance by clonal growth [m]: **0.07**
Clonal index: **5**

Bud bank

Number of buds per shoot at the soil surface (root buds excluded): **15**
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): **30**
Depth of the belowground bud bank (root buds exluded) [cm]: **3**
Number of buds per shoot at the soil surface (root buds included): **15**
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): **30**
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): **20**
Ploidy level (x): **4**
2C genome size [Mbp]: **1312.94**
1Cx monoploid genome size [Mbp]: **328.24**
Genomic GC content: **41.2 %**

Taxon origin

Origin in the Czech Republic: **archaeophyte**
Invasion status: **naturalized**
Geographic origin: **Mediterranean**
Period of introduction: **Early Middle Ages (550–1200)**
Introduction pathway: **intentional – ornamental**

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: **6 – transition between values 5 and 7**
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: **7x – indicator of slightly acidic to slightly basic conditions, never occurring in very acidic conditions (generalist)**
Nutrient indicator value: **7 – occurring at nutrient-rich sites more often than at average sites and only exceptionally at poor sites**
Salinity indicator value: **0 – not salt tolerant, glycophyte**

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-1.6**
Herb layer disturbance frequency indicator value: **-0.89**
Whole-community disturbance severity indicator value: **0.35**
Herb layer disturbance severity indicator value: **0.28**
Whole-community structure based disturbance indicator value: **0.24**
Herb layer structure-based disturbance indicator value: **0.25**

Habitat and sociology

Occurrence in habitats

1 Vegetation of cliffs, screes and walls

1C Walls: **1 – rare occurrence**
1D Mobile calcareous screes: **1 – rare occurrence**

6 Meadows and mesic pastures

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

8 Dry grasslands

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

11 Heathlands and scrub

11L Tall mesic and xeric shrub: **1 – rare occurrence**

11N Low xeric scrub: **1 – rare occurrence**

11R Scrub and pioneer woodland of forests clearings: **2 – optimum**

12 Forests

12B Alluvial forests: **1 – rare occurrence**

12C Oak-hornbeam forests: **1 – rare occurrence**

12D Ravine forests: **2 – optimum**

12E Herb-rich beech forests: **1 – rare occurrence**

12H Peri-Alpidic basiphilous thermophilous oak forests: **2 – optimum**

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

12J Acidophilous thermophilous oak forests: **1 – rare occurrence**

12T Robinia pseudacacia plantations: **2 – optimum**

12U Plantations of broad-leaved non-native trees: **2 – optimum**

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

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

13 Anthropogenic vegetation

13D Perennial thermophilous ruderal vegetation: **1 – rare occurrence**

13E Perennial nitrophilous herbaceous vegetation of mesic sites: **2 – optimum**

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: **XDD *Geo urbani-Alliarion petiolatae***

Diagnostic taxon of associations: **XCB11 *Asclepiadetum syriacae***, **XDD01 *Alliario petiolatae-Chaerophylletum temuli***, **XDD03 *Anthriscetum trichospermae***

Constant taxon

Constant taxon of associations: **XDD03 *Anthriscetum trichospermae***

Ecological specialization indices

Ecological specialization index for all vegetation types: **3.8**

Ecological specialization index for non-forest vegetation: **3.9**

Ecological specialization index for forest vegetation: **4.6**

Colonization ability

Index of colonization success (ICS): **6**

Index of colonization potential (ICP): **9**

Optimum successional age [years]: **39**

Distribution and frequency

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

Floristic region: **Europe**

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

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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: 547
taxon.data.freq_in_quad: 1421

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **0.5 %**
Occurrence frequency in vegetation plots with a cover above 5%: **7.4 %**
Occurrence frequency in vegetation plots with a cover above 25%: **0 %**
Occurrence frequency in vegetation plots with a cover above 50%: **0 %**
Mean percentage cover in vegetation plots: **2.9 %**
Maximum percentage cover in vegetation plots: **18 %**

Number of habitats with taxon occurrence in the Czech Republic

Number of narrow habitats in which the taxon occurs: **21**
Number of narrow habitats in which the taxon has its optimum: **6**
Number of broad habitats in which the taxon occurs: **6**
Number of broad habitats in which the taxon has its optimum: **3**

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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