

# Swertia perennis subsp. perennis

## 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]: **0.15-0.6**

Growth form: **clonal herb**

Life form: **hemicryptophyte**

Life strategy: **CSR - competitor/stress-tolerator/ruderal**

## Leaf

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

Leaf arrangement (phyllotaxis): **alternate, opposite, rosulate**

Leaf shape: **simple - entire**

Stipules: **absent**

Petiole: **both present and absent**

Leaf anatomy: **helomorphic**

## Flower

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

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

Flower colour: **blue-violet**

Flower symmetry: **actinomorphic**

Perianth type: **calyx and corolla**

Perianth fusion: **fused**

Shape of the sympetalous corolla or syntepalous perianth: **rotate**

Calyx fusion: **fused at the base**

Inflorescence type: **panicula**

Dicliny: **synoecious**

Generative reproduction type: **facultative allogamy**

Pollination syndrome: **insect-pollination, selfing**

### 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: **non-myrmecochorous (b)**



### Belowground organs and clonality

Shoot metamorphosis: **rhizome**

Storage organ: **rhizome**

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

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

Primary root: **absent**

Persistence of the clonal growth organ [year]:

Number of clonal offspring:

Lateral spreading distance by clonal growth [m]: **0.01**

Clonal index: **3**

#### Bud bank

Number of buds per shoot at the soil surface (root buds excluded):

Number of buds per shoot at a depth of 0–10 cm (root buds excluded):

Number of buds per shoot at a depth greater than 10 cm (root buds excluded):

Size of the belowground bud bank (root buds excluded):

Depth of the belowground bud bank (root buds excluded) [cm]:

Number of buds per shoot at the soil surface (root buds included):

Number of buds per shoot at a depth of 0–10 cm (root buds included):

Number of buds per shoot at a depth greater than 10 cm (root buds included):

Size of the belowground bud bank (root buds included):

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

### Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

Carnivory: **non-carnivorous**

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

### Karyology

Chromosome number (2n): **28**

Ploidy level (x): **2**

2C genome size [Mbp]: **3679.29**

1Cx monoploid genome size [Mbp]: **1839.65**

Genomic GC content: **41.7 %**

## 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: **3 - cool indicator, occurring mainly in subalpine areas**

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

Reaction indicator value: **5 - indicator of moderate acidity, occurring rarely in strongly acidic as well as in neutral to alkaline 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: **-0.66**

Herb layer disturbance frequency indicator value: **-0.66**

Whole-community disturbance severity indicator value: **0.14**

Herb layer disturbance severity indicator value: **0.19**

Whole-community structure based disturbance indicator value: **0.84**

Herb layer structure-based disturbance indicator value: **0.91**

## Habitat and sociology

Occurrence in habitats

1 Vegetation of cliffs, screes and walls

1B Siliceous cliffs and block fields: **2 - optimum**

2 Alpine and subalpine grasslands

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

5 Vegetation of springs and mires

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

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

7 Acidophilous grasslands

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

11 Heathlands and scrub

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

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

Affinity to the forest environment

Affinity to the forest environment in Thermophyticum: **0 - taxon that does not spontaneously occur in Czech forests**

Affinity to the forest environment in Mesophyticum and Oreophyticum: **0 - taxon that**

**does not spontaneously occur in Czech forests**

Diagnostic taxon

Diagnostic taxon of classes: [AC Elyno-Seslerietea](#)

Diagnostic taxon of alliances: [ACA Agrostion alpinae](#), [RAD Swertio perennis-Dichodontion palustris](#)

Diagnostic taxon of associations: [ACA01 Saxifraga oppositifoliae-Festucetum versicoloris](#), [ADD02 Salicetum lapponum](#), [RAD02 Swertietum perennis](#), [RBC04 Bartsio alpinae-Caricetum nigrae](#), [RBC05 Calliergo sarmentosi-Eriophoretum angustifolii](#)

Constant taxon

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

Constant taxon of alliances: [ACA Agrostion alpinae](#)

Constant taxon of associations: [ACA01 Saxifraga oppositifoliae-Festucetum versicoloris](#), [RAD02 Swertietum perennis](#), [RBC04 Bartsio alpinae-Caricetum nigrae](#)

Dominant taxon

Dominant taxon of associations: [RBC04 Bartsio alpinae-Caricetum nigrae](#)

Ecological specialization indices

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

Ecological specialization index for non-forest vegetation: **5.5**

Colonization ability

Index of colonization success (ICS): **1**

Index of colonization potential (ICP): **1**

**Distribution and frequency**

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

Floristic region: **Europe**

Continentality degree: **5**

Distribution range extension along the continentality gradient: **3**

Elevational belt in the Czech Republic: **montane belt, subalpine belt**

Occurrence frequency in the basic grid mapping cells and quadrants of the basic grid mapping cells: **20**

taxon.data.freq\_in\_quad: **27**

Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **0.1 %**

Occurrence frequency in vegetation plots with a cover above 5%: **33.3 %**

Occurrence frequency in vegetation plots with a cover above 25%: **6.1 %**

Occurrence frequency in vegetation plots with a cover above 50%: **0 %**

Mean percentage cover in vegetation plots: **7.9 %**

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: **7**

Number of narrow habitats in which the taxon has its optimum: **3**

Number of broad habitats in which the taxon occurs: **5**

Number of broad habitats in which the taxon has its optimum: **3**

## **Threats and protection**

Red List 2017 (national categories): **C2r - endangered taxon, rare**

Red List 2017 (IUCN categories): **EN - endangered**

Legal protection: **endangered taxon**