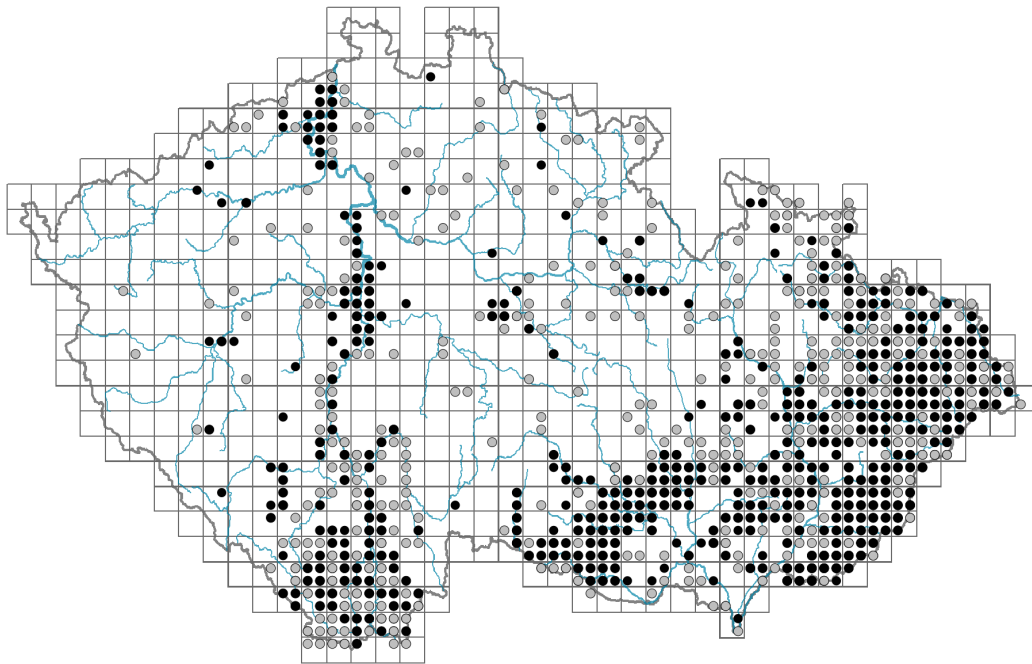


# *Symphytum tuberosum*

## Distribution



© Pavel Veselý

### 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]: **0.2-0.5**Growth form: **clonal herb**Life form: **geophyte**Life strategy: **CSR - competitor/stress-tolerator/ruderal**Life strategy (Pierce method based on leaf traits): **CR**Life strategy (Pierce method, C-score): **50 %**Life strategy (Pierce method, S-score): **0 %**Life strategy (Pierce method, R-score): **50.1 %**

## Leaf

Leaf presence and metamorphosis: **leaves present, not modified**Leaf arrangement (phyllotaxis): **alternate**Leaf shape: **simple - entire**Stipules: **absent**Petiole: **both present and absent**Leaf life span: **spring green**Leaf anatomy: **mesomorphic, hygromorphic**

## Flower

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

© Milan Chytrý



© Alena Lepš (flora.upol.cz)



© Jana Moravcová

Flowering phase: **5 Sorbus aucuparia-Galium odoratum (end of mid-spring)**

Flower colour: **yellow**

Flower symmetry: **actinomorphic**

Perianth type: **calyx and corolla**

Perianth fusion: **fused**

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

Calyx fusion: **synsepalous**

Inflorescence type: **cincinnus**

Dicliny: **synoecious**

Generative reproduction type: **facultative allogamy**

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



## Fruit, seed and dispersal

Fruit type: **dry fruit - cluster of four one-seeded nutlets**

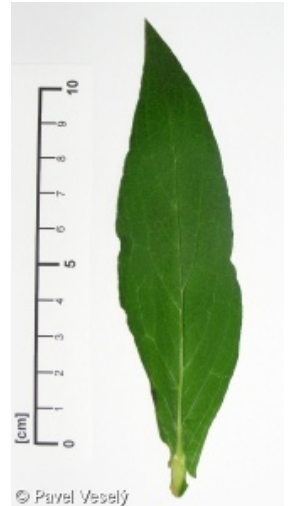
Fruit colour: **brown**

Reproduction type: **by seed/spores and vegetatively**

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

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

Myrmecochory: **myrmecochorous**



## Belowground organs and clonality

Shoot metamorphosis: **rhizome**

Storage organ: **rhizome**

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

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

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

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

Primary root: **absent**

Persistence of the clonal growth organ [year]: **3.3**

Number of clonal offspring: **1**

Lateral spreading distance by clonal growth [m]: **0.13**

Clonal index: **4**

### 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): **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): **20**

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

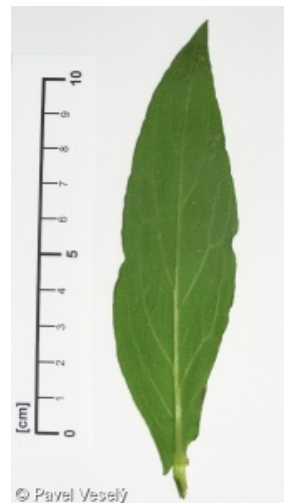
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Depth of the belowground bud bank (root buds included) [cm]: **4**



## Trophic mode

Parasitism and mycoheterotrophy: **autotrophic**

Carnivory: **non-carnivorous**

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

## Karyology

Chromosome number (2n): **32, 96**

Ploidy level (x): **4, 12**

2C genome size [Mbp]: **3478.8**

1Cx monoploid genome size [Mbp]: **444.42**

## Taxon origin

Origin in the Czech Republic: **native**

## Ecological indicator values

Ellenberg-type indicator values

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

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: **7 - indicator of slightly acidic to slightly basic conditions, never occurring in very acidic conditions**

Nutrient indicator value: **6 - transition between values 5 and 7**

Salinity indicator value: **0 - not salt tolerant, glycophyte**

Indicator values for disturbance

Whole-community disturbance frequency indicator value: **-1.92**

Herb layer disturbance frequency indicator value: **-0.69**

Whole-community disturbance severity indicator value: **0.26**

Herb layer disturbance severity indicator value: **0.11**

Whole-community structure based disturbance indicator value: **0.08**

Herb layer structure-based disturbance indicator value: **0.18**

## Habitat and sociology

Occurrence in habitats

4 Wetland and riverine herbaceous vegetation

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

4K Petasites fringes of montane brooks: **1 - rare occurrence**

6 Meadows and mesic pastures

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

8 Dry grasslands

8D Broad-leaved dry grasslands: **1 - rare occurrence**

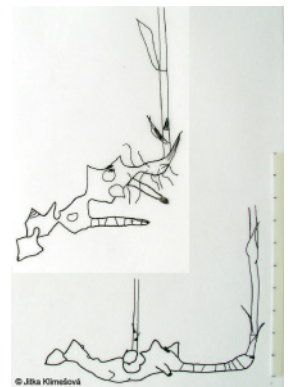
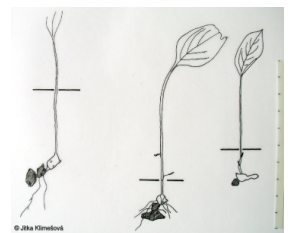
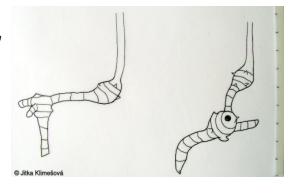
8F Thermophilous forest fringe vegetation: **1 - rare occurrence**

11 Heathlands and scrub

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

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

12 Forests



12B Alluvial forests: **2 - optimum**  
 12C Oak-hornbeam forests: **2 - optimum**  
 12D Ravine forests: **1 - rare occurrence**  
 12E Herb-rich beech forests: **1 - rare occurrence**  
 12F Limestone beech forests: **1 - rare occurrence**  
 12H Peri-Alpidic basiphilous thermophilous oak forests: **1 - rare occurrence**  
 12I Sub-continental thermophilous oak forests: **1 - rare occurrence**  
 12J Acidophilous thermophilous oak forests: **1 - rare occurrence**  
 12T Robinia pseudacacia plantations: **1 - rare occurrence**  
 12V Spruce plantations: **1 - rare occurrence**



### 13 Anthropogenic vegetation

13E Perennial nitrophilous herbaceous vegetation of mesic sites: **1 - rare occurrence**  
 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: [LBB \*Carpinion betuli\*](#)

Diagnostic taxon of associations: [LBB03 \*Carici pilosae-Carpinetum betuli\*](#)

### Ecological specialization indices

Ecological specialization index for all vegetation types: **5**

Ecological specialization index for non-forest vegetation: **4.3**

Ecological specialization index for forest vegetation: **5.6**

### Colonization ability

Index of colonization success (ICS): **4**

Index of colonization potential (ICP): **2**

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

### Distribution and frequency

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

Floristic region: **Europe**

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: 359

taxon.data.freq\_in\_quad: 833

### Commonness in vegetation plots from the Czech Republic

Occurrence frequency in vegetation plots: **0.9 %**

Occurrence frequency in vegetation plots with a cover above 5%: **4.3 %**

Occurrence frequency in vegetation plots with a cover above 25%: **0.4 %**

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

Mean percentage cover in vegetation plots: **2.6 %**

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: **19**

Number of narrow habitats in which the taxon has its optimum: **2**

Number of broad habitats in which the taxon occurs: **6**

Number of broad habitats in which the taxon has its optimum: **1**

### **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**